# Canyons of the Ancients National Monument

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	₹angeland Health Evaluation Summary Worksheet - Evaluation Area
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							The second secon	Comments
	(V)	3	dence of minor site; minimal evidence of past or patterns are stable current soil deposition or crosion.	Matches what site, some evi erosion. Flow and short	Nearly matches what is expected for the site; erosion is minor with some instability and deposition.	More numerous than expected; deposition and cut areas common; occasionally connected.	Extensive and numerous; unstable with active erosion; usually connected.	2. Water Flow Patterns
			1					Comments
	57	J	Current or past formation of rills as expected for the site	No recent formation of rills, old rills have blunted or muted features.	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	Rill formation is moderately active and well defined throughout most of the area	Rill formation is severe and well defined throughout most of the area	1. Rills
in .	Hydrologic Function	Soil/Site Stability	5. None to Slight	4. Slight to Moderate	3. Moderate	2. Moderate to Extreme	1. Extreme	Indicator:
							ator Rating:	Part 2. Indicator Rating:
			Description and/or experience X	or Site/Soil Description a	(ERA number)	Ecological Reference Area	Benchmark used for comparison: Ecolog	Benchmark use
		40		rack	nearby two-t	e e.g. roads, chainings, fir	Offsite influences on area and significance e.g. roads, chainings, fire:	Offsite influenc
							Minima	Livestock Use:
							PI	Wildlife Use:
			Normal 2001 Wet	Drought 2000	Recent Weather (last 2 years):	11 °	T: Cortez 13", Hovenweep 11	Avg. annual PPT:
	- bedrock	424"-	2	3 ZO" heavy Ca CO	a(03	212">20" lower	cic hosizan	16-12" ca
						oth:	List diagnostic horizons in profile and depth:	List diagnostic
					)-40" / Deep >40"	10-20" Moderate 20-40"	Very shallow <10" Shallow 10-20"	Depth: Very s
			son shale	Parent material: Morrison			: sandy clay loan	Surface texture: Sandy
							Evaluation Area Determination:	Evaluation Are
		4		3	18	2 bearnek 20"-40	10-32"	1 CaCD = 10
2						oth:	List diagnostic horizons in profile and depth:	List diagnostic
					)-40" X Deep >40"	10-20" Moderate 20-40"	Very shallow <10" Shallow 10-20"	Depth: Very s
			son shale	Parent material: Morrison			stony clay loam	Surface texture:
					erence area:	vey, and/or ecological ref	Range/Ecological site description, soil survey, and/or ecological reference area:	Range/Ecologic
				TO STORY OF THE PARTY OF THE PA				0
	5340	Elevation:	36	Topographic Position:		Aspect: 770°	/	Slope: 3%
	** 1			Number: 1/03		Saltdesert	Clay	Range/Ecological Site Name:
			04	Number: 138	SOCING S	alf Zwinkor-Cla	Soil Map Unit/Component Name: ()	Soil Map Unit
				Number: 15+16		Site Photos - Roll: 4	1-3-8	Aerial Photo:
			## T	(N R 19 W)	Legalid IS 22 Tack	18 108° 56,075'	GPS lat 37° 21, 550' long	Location: GP
				Pasture:		Ser Ket	AMOUNT HOLLOW	Allotment:
			Polygon # 50	Date: 6/1/01			Rohman Stoner	Observer(s):
						alion:	r at 1 1. Area of therest Documentation:	rait I. Alea

Indicator:	1. Extreme	2. Moderate to Extreme	3. Moderate	4. Slight to Moderate	5. None to Slight	Soil/Site	Hydrologic	Bio
3. Pedestals and/or Terracettes	Abundant active pedestalling and numerous terraceites, Many rocks and plants are pedestalled; exposed plant roots are common.	Modernia active pedestalling; terracettes common. Some rocks and plants are pedestalled with occasional exposed roots.	Slight active pedestalling; most pedestals are in flow paths and interspaces and/or on exposed slopes. Occasional terracettes present.	Active pedestalling or terracette Current or past evidence of formation is rare; some evidence pedestalled plants or rocks as of past pedestal formation expected for the site. Terracet especially in water flow patterns absent or uncommon. and/or on exposed slopes.	Current or past evidence of pedestalled plants or rocks as expected for the site. Terracettes absent or uncommon.	Stability	Lunction	
Comments								
4. Bare Ground	Much higher than expected for Moderately to much higher than the site. Bare areas are large and expected for the site. Bare areas generally connected.	Moderately to much higher than expected for the site. Bare areas are large and occasionally connected.	Moderately higher than expected for the site. Bare areas are of moderate size and sporadically connected		Amount and size of bare areas nearly to totally match that expected for the site.	W	W	
Comments			Tompretied,	connected.				
5. Guilles	Common with indications of active crosion and downcutting; vegetation is infrequent on slopes and/or bed. Nickpoints and headents are numerous and	Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are	Moderate in number with indications of active erosion; vegetation is intermittent on slopes and/or bed. Occasional	Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.	Drainages are represented as natural stable channels; no signs of erosion with vegetation common.	M	U7	
Comments								
6. Wind-Scoured Blowouts, and/or Deposition Areas	Extensive.	Common	Occasionally present.	Infrequent and few.	Marches what is expected for the site.	w		
Comments								
fovement	Extreme; concentrated around obstructions. Most size classes of litter have been displaced.	Moderate to extreme; loosely concentrated near obstructions. size classes in scattere Moderate to small size classes of concentrations around litter have been displaced.	f smaller d pressions.	Slightly to moderately more than Matches that expected for the expected fo	Matches that expected for the site with a fairly uniform distributing of litter.		(J)	
Comments								
8. Soll Surface E Resistance to d Erosion a	Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.	Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.	Significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the site.	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the site. Stabilizing agents reduced below expected.	Matches that expected for the site. Surface soil is stabilized by organic matter decomposition products and/or a biological crust.	7	4	£
Comments								

interspaces and/or soil structure shows signs of degradation, especially in structure is plant interspaces.  Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Flant cover changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.  Rarely present or is thin and weakly restrictive to water reduced; and/or relative fr/S groups dominance of F/S groups slightly reduced.  Number of F/S groups slightly reduced.  Sight plant mortality and/or production for the site; and/or number of species within F/S groups slightly reduced.  Sight plant mortality and/or production for the site; and/or site potential and weather.  Sight plant mortality and/or production for the site; and/or site potential and weather.  Sight plant mortality and/or production for the site is relative to site potential and weather.  Sight plant mortality and/or production for the site is relative to site potential and weather.  Fresent primarily on disturbed in the sites.  Present primarily on disturbed in the sites.	degradation in plant interspaces and/or soil structure is plant canopies. Soil structure is plant canopies. Soil structure is degradation, especially in reduced due to adverse changes in plant content is significantly reduced.  Infiltration is moderately reduced due to adverse changes in plant cormmunity composition changes in plant cormmunity and/or distribution. Plant cover composition and/or distribution. Plant cover changes in plant community and/or distribution. Plant cover changes in plant community composition changes in plant community and/or distribution. Plant cover changes have only a infiltration.  Moderately videspread: weakly restrictive to water movement and root penetration.  Number of F/S groups not expected for the site; and/or one subdominant F/S groups dominance of F/S groups dominance of F/S groups has replaced by F/S groups dominance of F/S groups has replaced for the site; and/or number of species within F/S groups slightly reduced.  Some dead and/or decadent expected for the site; and/or number of species within F/S groups slightly reduced.  Moderately more or less relative slightly more or less relative to site potential and weather.  Moderately more or less relative slightly more or less relative to site potential production  Moderately more or less relative slightly more or less relative to site potential production  Scattered throughout the site. Present primarily on disturbed production  Scattered throughout the site. Present primarily on disturbed production
Moderate soil loss on soil loss has occurred degradation in plant interspaces and off soil resture shows signs structure and organic mater with some degraded and soil organic mater content is significantly reduced.  Infiltration is moderately in plant tommunity composition and/or distribution. Plant cover changes in plant community composition and/or distribution. Plant cover changes in plant community and/or distribution and moderately reduced; and/or or reduced; and/or effect on infiltration.  Number of FS groups from the stice and/or reduced weakly restrictive to water moderately reduced; and/or one feduced in and/or effect on infiltration.  Number of FS groups not species within FS sproups not expected for the site; and/or species within FS sproups moderately reduced.  Number of species within FS sproups for the site; and/or expected for the site; and/or species within FS sproups moderately reduced.  Number of species within FS sproups for species within FS sproups not expected for the site; and/or sproups moderately reduced.  Number of species within FS sproups for species within FS sproups moderately reduced.  Number of species within FS sproups not expected for the site; and/or sproups moderately reduced.  Number of species within FS sproups have been modified from that expected for the site.  Slightly more of less relative site potential and weather.  Slightly more of less relative site potential and weather.  Slightly more of less relative to site potential production  Some dead and/or decadent site potential production  Slightly more of less relative site potential production on the site.  Slightly more of less relative site in the site potential and weather.  Slight production of species within FS site potential production on the site.  Slight production of spotential production on the site.  Slight production on the site i	Moderate soil loss on soil loss has occurred degradation in plant interspaces and off soil resture shows signs structure and organic mater with some degraded and soil organic mater content is significantly reduced.  Infiltration is moderately in plant tommunity composition and/or distribution. Plant cover changes in plant community composition and/or distribution. Plant cover changes in plant community and/or distribution and moderately reduced; and/or or reduced; and/or effect on infiltration.  Number of FS groups from the stice and/or reduced weakly restrictive to water moderately reduced; and/or one feduced in and/or effect on infiltration.  Number of FS groups not species within FS sproups not expected for the site; and/or species within FS sproups moderately reduced.  Number of species within FS sproups for the site; and/or expected for the site; and/or species within FS sproups moderately reduced.  Number of species within FS sproups for species within FS sproups not expected for the site; and/or sproups moderately reduced.  Number of species within FS sproups for species within FS sproups moderately reduced.  Number of species within FS sproups not expected for the site; and/or sproups moderately reduced.  Number of species within FS sproups have been modified from that expected for the site.  Slightly more of less relative site potential and weather.  Slightly more of less relative site potential and weather.  Slightly more of less relative to site potential production  Some dead and/or decadent site potential production  Slightly more of less relative site potential production on the site.  Slightly more of less relative site in the site potential and weather.  Slight production of species within FS site potential production on the site.  Slight production of spotential production on the site.  Slight production on the site i
Some soil loss has occurred and/or soil structure shows signs structure and organic matter of degradation, especially in plant interspaces.  Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a protection.  Infiltration and runoff are equal to that expected for the site. Plant cover clistribution amount) adequate for site plant cover changes have only a mount) adequate for site plant cover changes have only a protection.  Rarely present or is thin and weakly restrictive to water movement and root penetration.  None to minimal; not restrictive to water movement and root penetration.  None to minimal; not restrictive to water movement and root penetration.  None to minimal; not restrictive penetration of F/S groups slightly for that expected for the site.  None to minimal; not restrictive penetration of F/S groups has been modified from that expected for the site.  Sight plant mortality and/or penetration penetration and decadence matches that expected for the site.  Sightly more or less relative to Amount is what is expected for the site.  Plant mortality and decadence matches that expected for the site.  Plant mortality and decadence matches that expected for the site.  Sightly more or less relative to Amount is what is expected for the site.  Exceeds 80% of potential production	Some soil loss has occurred and/or soil structure shows signs structure and organic matter of degradation, especially in plant interspaces.  Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a protection.  Infiltration and runoff are equal to that expected for the site. Plant cover clistribution amount) adequate for site plant cover changes have only a mount) adequate for site plant cover changes have only a protection.  Rarely present or is thin and weakly restrictive to water movement and root penetration.  None to minimal; not restrictive to water movement and root penetration.  None to minimal; not restrictive to water movement and root penetration.  None to minimal; not restrictive penetration of F/S groups slightly for that expected for the site.  None to minimal; not restrictive penetration of F/S groups has been modified from that expected for the site.  Sight plant mortality and/or penetration penetration and decadence matches that expected for the site.  Sightly more or less relative to Amount is what is expected for the site.  Plant mortality and decadence matches that expected for the site.  Plant mortality and decadence matches that expected for the site.  Sightly more or less relative to Amount is what is expected for the site.  Exceeds 80% of potential production
Soil surface horizon intact. Soil structure and organic matter content match that expected for the site.  Infiltration and runoff are equal to that expected for the site.  Plant cover (distribution and amount) adequate for site protection.  None to minimal; not restrictive to water movement and root penetration  Plant mortality and decadence matches that expected for the site.  Plant mortality and decadence matches that expected for the site.  Plant mortality and weather.  Amount is what is expected for the site potential and weather.  Exceeds 80% of potential production  Rarely present on the site.	Soil surface horizon intact. Soil structure and organic matter content match that expected for the site.  Infiltration and runoff are equal to that expected for the site.  Plant cover (distribution and amount) adequate for site protection.  None to minimal; not restrictive to water movement and root penetration  Plant mortality and decadence matches that expected for the site.  Plant mortality and decadence matches that expected for the site.  Plant mortality and weather.  Amount is what is expected for the site potential and weather.  Exceeds 80% of potential production  Rarely present on the site.
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indicator ratings in the indicator summary section Attribute Summary: Circle the umber that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of | 5. None to Slight Crusts Comments 18. Biological Comments (native or seeded) Perennial Plants Capability of 17. Reproductive Indicator: climatic conditions. very limited suite of functional Found only in protected areas. groups. reduced relative to recent vegetative tillers is severely Capability to produce seed or 1. Extreme in protected areas. Largely absent, occurring mostly in protected areas and with a climatic conditions reduced relative to recent Capability to produce seed or vegetative tillers is greatly 2. Moderate to Extreme minor component in interspaces | continuity is broken climatic conditions. vegetative tillers is somewhat Capability to produce seed or limited relative to recent 3. Moderate Evident throughout the site but vegetative tillers is only slightly climatic conditions. limited relative to recent Capability to produce seed or 4. Slight to Moderate Largely intact and nearly vegetative tillers is not limited 2. Moderate to Extreme matches site capability relative to recent climatic Capability to produce seed or Extreme Slight to Moderate Moderate Indicator Summary: 5. None to Slight Stability Soil/Site Soil/Site 5 Hydrologic Function Function Hydrologic W 5 Integr Integr Bioti Bioti

Obs	ervers: Stoner	R	O	m	9 N		185	pel	5				Data			: 6	-1-	01	1			Polyg	on#:	50	
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mel	ter for frame location	0.0	1.5	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5				
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	ble 3-10 in					0			100	4/3	1	0		10				1	-	1		46	2.3	0.75	0.6
_	ne 10-24 in.			-						200	700			LE.						_					
	older >24 in.			-					18		_														-
200	TOUR									1000															

Code	Range	Mid-point	Code	Range	Mid-point
11	0 - 1.0% cover	0.5%	se (6	55.1 - 65% cover	60.0%
e:	1.1 - 5.0% cover	3.0%	7	65.1 - 75% cover	70.0%
	5.1 - 15% cover	10.0%	8,	75.1 - 85% cover	80.0%
7	15.1 - 25% cover	20.0%	(0).	85.1 - 95% cover	90.0%
3.5	25.1 - 35% cover	30.0%	Δ	95.1 - 99% cover	97.0%
4	35.1 - 45% cover	40.0%	* X -	99.1 - 100% cover	99.5%
5	45.1 - 55% cover	50.0%	Heradro		

	Species code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	SCC	ACC	% Freq	CI
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	s common in the e															-	-	-		-	-				

cies common in the evaluation area that were not measured on the transect:

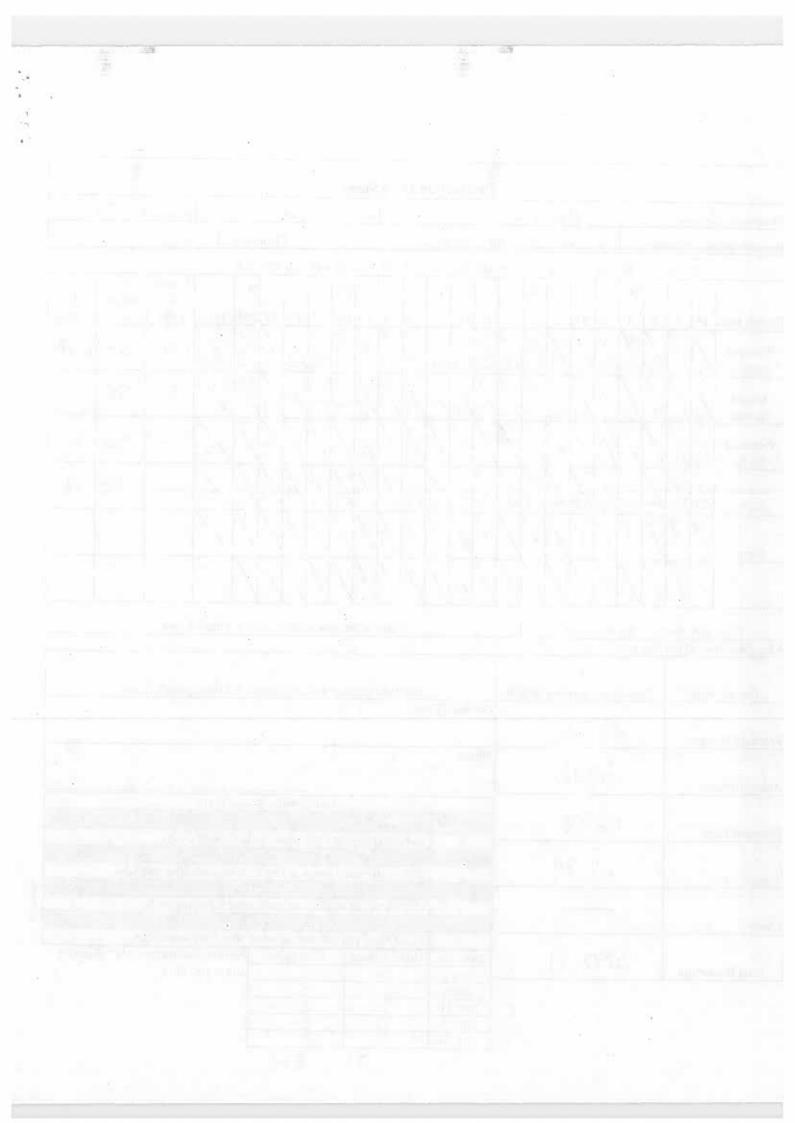
Intercept % Cover Total Line Length: 30 m Observers: Rohman ntercept values that are standing dead material 1963 1984 From To 0990 Stones 797 7 2 inter From J inter Transect From 5 으 inter From Line Intercept Species Codes: To inter From Date: 6/1/01 ₽ inter From Polygon #: 50 То inter From 7 inter

From 7 inter From To inter From 귱 inter From Species Codes: o<sup>t</sup> inter From То inter From 귱 inter From 7 inter

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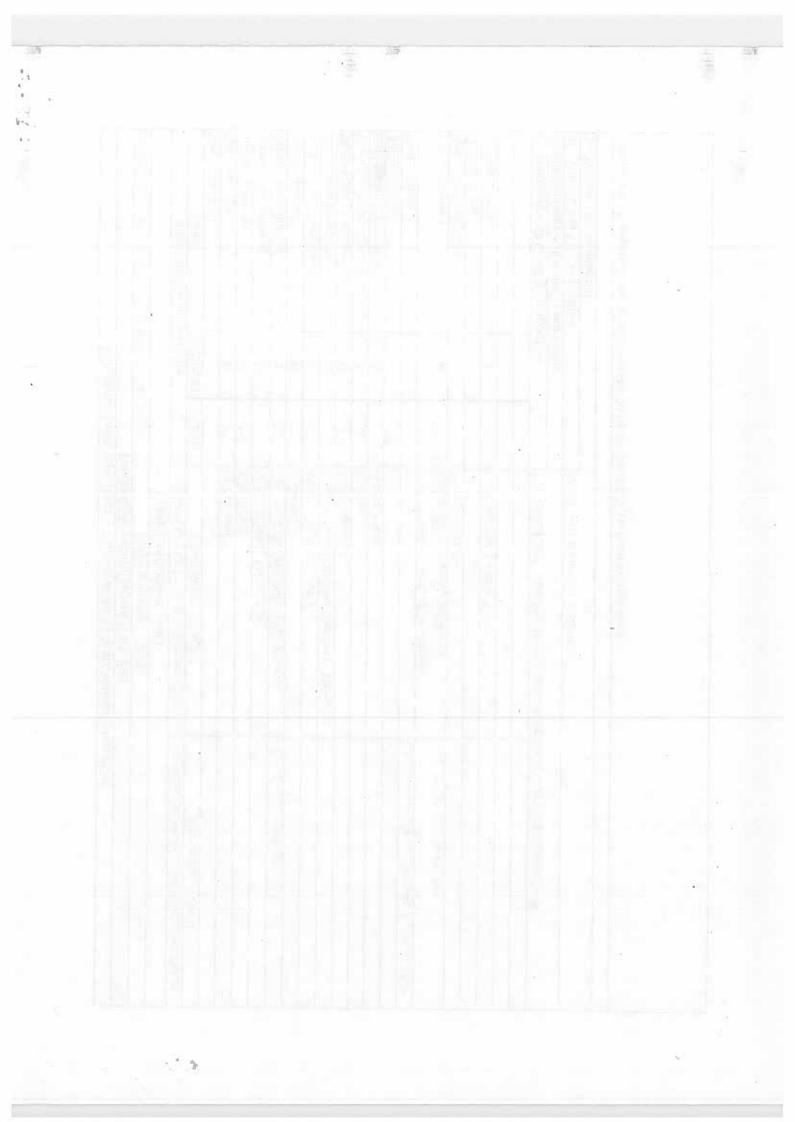
			n Data Sheet		
bservers: Rohman	Stoner HASPE	L-5	Date: 6/1/0	Polygon	#: 50
ransect length: 30 me	eters Frames per transec	et: 20 @ 20x50 cr	n	Transect of	<del> </del>
0.0 1.5		12.0 13.5 15.0 16.5	18.0 19.5 21.0 22.5 24.0 25.5	27.0 28.5	
0.0	XXX	X	X	Correc-	1 1
				tion	weight dry
Growth form 1* 2	3 4 5 6* 7 8	9 10 11* 12	13 14 15 16* 17 18	19 20* Total factor	factor weight
Perennial Grasses 6 2	4/13/7/11/2/6	/2/2/3/1	/2/3/2/1/6/2	4/3/82 1.21	.65 64.49
Annual			11/4/2/7	TT 24.5 . 57	.95 13.27
Grasses /5/2/	7 / / / / /	7777	11111		90 3.6
Perennial Forbs	/ / / / / / /	<u> </u>	/ <del>-</del> ////////	4 -	.90 3.6
Annual Forbs	4/1/1/1	A/ VA/4	44/4/	1/8 -	,50 4
Polos VIV					
Shrub /	<u> </u>	<u> </u>	<i>                                     </i>	XXXX	-
		VVVV	V/V/V/V		
Correction fact	or = clip wt /est wt.		Total production in lb	ac = 89.2  x total dry wt.	
* Location for soil stal	bility test				
Growth form	Pounds per acre dry wei			clipped for these growth	forms:
	20010	Perennial Fo	rbs:		
Perennial Grasses	287.63				
	*	Shrubs:	Date 48	47114	
Annual Grasses	59.18	PE	CICKLY PEAR CA	15 1012	
uu			Soil Stab	ility Rating Form	
Descript Fort	16.06	Rating	Criteria fo	r assignment to stability o	lass
Perennial Forbs		0	Soil is too unstable to sam	ple (falls through sieve)	
	17.84	The same of the sa	50% of standard integrity	lost within 5 seconds of	msernon in water
Annual Forbs	11.01	2	50% of structural integrity	sieve after 5 dipping cycle	SCIGOII
		4	10-25% of soil remains or		
Shrub			25-75% of soil remains of	n sieve after i dipping cyc	les
Silido		6 -	75-100% of soil remains	on sieve after 5 dipping cy	cles
	380.71	Location	Under canopy Inter-s	pace Samples should be	ne < 1/4 " diameter
Tatal Deaduction	000,11	plot I	3 2	and < 1/8" thick	
Total Production					
Total Production		7.50 plot 6	6 1 3		
Total Production		7.50 plot 6 15 plot 11 27.50 plot 16	6 6		

\$ P.



	Nanggiana	El El	Functional/Structural Group Worksheet	
Observers: III & BLS CTONER D	Date: 6/L	101	Polygon number: 50	
V			Clayey Saltdesert - 403	
Functional/Structural Groups	roups		Species List for Functional/Structural Group	Species List for Functional/Structural Group
Name	Potential*	Actual	Plant names - Potential	Plant names - Actual
Trees - deciduous				
Trees - evergreen	N	1	Utah Juniper	
Shrubs - sprouting	M	4	Rabbitbrush	
Shrubs - non-sprouting	D		Nuttall saltbush, Mat saltbush	
Shrubs - non-sprouting	S	-1	Shadscale, Fourwing Winterfal, budsage,	Big Some, (xreasourosci
Shrubs - invasive	M	4	Snakeweed	
Cool Season Bunchgrasses	S		Salina wildrye, squirreltail	
Cool Season Bunchgrasses	N		Ricegrass, needle&thread, Sandburg, Threeawn	
Warm Season Bunchgrasses	M	0	Alkali sacaton	
Warm Season Rhizomatous Grasses	S	ഗ	Gallète,	
Cool Season Rhizomatous	S		Westernwheat	
Annual Grasses		S		
Forbs - annual				Indian Wheat stickseed, sand aster
Forths - porannial	N	7	Onion (Phlox) Primrose, Princesplume. Globemallow Sego, Cymopteris	Link Colochains larkspur
Forbs Nitrogen fixing			Wooly locoweed	
Noxious weeds			The same of the sa	
Biological crusts	Š	S	Cyanobacteria, Lichens, Moss	
D - Dominant = 40 to 100% composition	ion		<ul> <li>Potential based on ecological/range site descript</li> </ul>	cription or ecological reference area
S - Subdominant = 10 to 40% composition	sition			
M - Minor = 2 to 5% composition			Actual is for the area of evaluation	

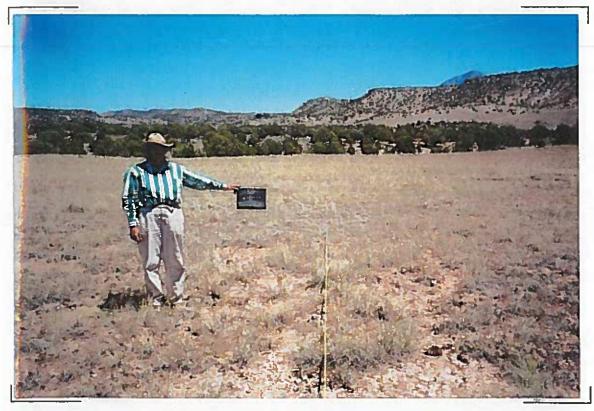
# .. 2m

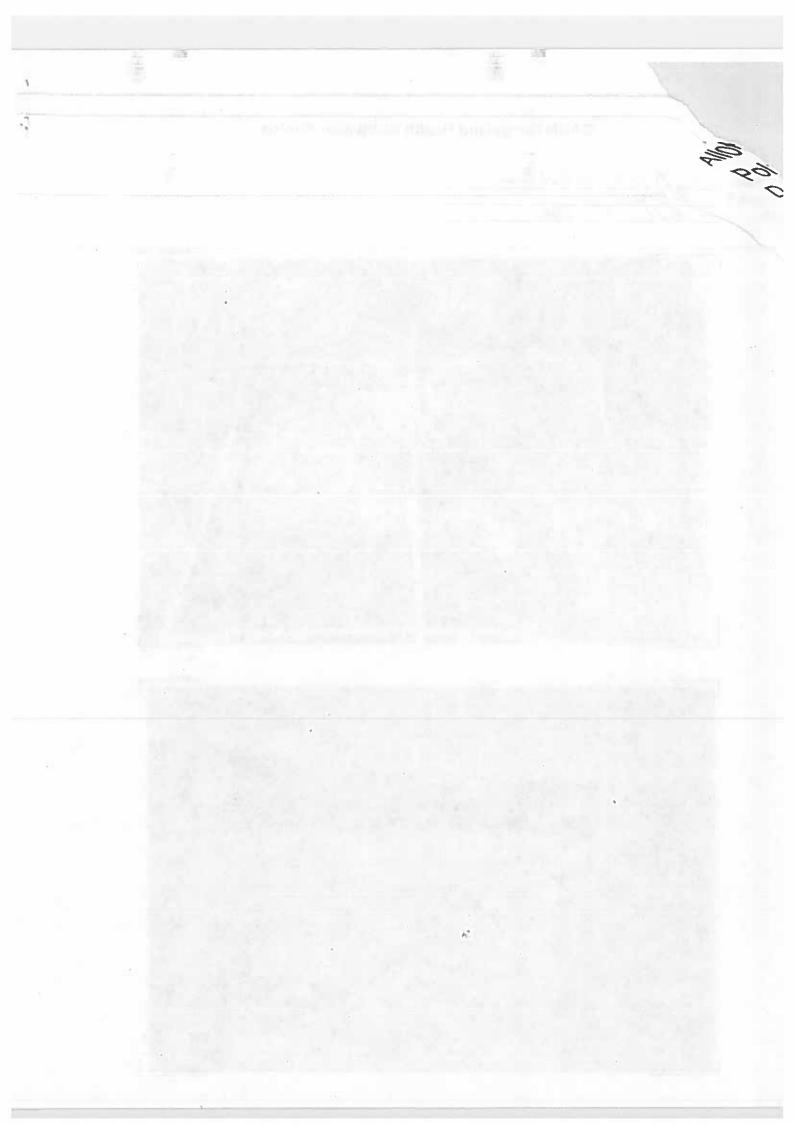


### **CANM Rangeland Health Evaluation Photos**

ment ygon # ute CANNONBALL 050 6/1 / 12001







## Canyons of the Ancients National Monument

Rangeland Health Evaluation Summary Worksheet - Evaluation Area

	or mirer ear pocamentation.	TALLOUI.						
Observer(s):	Rohman Madsen	(Neaver		Date: 8 /1 /01	Polygon# 166			
Allotment:	ahone Mesa on	ahoto board ) Y	lellow Jacket	re:				
Location: GP	GPS lat 37° 24.733' lo	long 108° 57.601	Lei	EXSST	36N RIPW			
Aerial Photo:	1-2-12	Site Photos - Roll: 17		†   0				
Soll Map Unit	ame:	ayspring s		Number: 2	2			
E	cal Site Name: Salt dese	+ Break		10¢				
Slope: 7 %		Aspect: 64°				Elevation: 5650	5650	
Range/Ecologi	Range/Ecological site description, soil survey, and/or ecological reference area:	rvey, and/or ecological re	ference area:					
Surface texture: Very	very stonu clay	y loam		Parent material:	Iduan From Marrison	Shalo		
Depth: Verys	Very shallow <10" X Shallow 10-20"	10-20" X Moderate 20-40"	0-40" Deep >40"					
List diagnostic	List diagnostic horizons in profile and depth:							
19-18" aup	aupsum crustals	6-20" weather od	Morrison shalo	ယ		4		
Evaluation Are	Evaluation Area Determination:							
Surface texture: VPT	very stony chy	loam		Parent material: Mor	Morrison shale			
Depth: Verys	Very shallow <10" Shallow	Shallow 10-20" Moderate 20-40"	0-40" X Deep >40"					
List diagnostic	List diagnostic horizons in profile and depth:	pth:					3	
116" - slight C	103 Flecking Mc-clay	2 22" increased Ga	(O-	3 Zy" - bedrock		4		
Avg. annual PPT:	T: Cortez 13", Hovenweep 11"	0.112	Recent Weather (last 2 years):	Drought 2000	Normal 2001 Wet			
Wildlife Use: Minima	unimal - rabbit							
Livestock Use:	moderate -> heavy	14 cattle						-
Offsite influenc	Offsite influences on area and significance e.g. roads, chainings, fire:	e e.g. roads, chainings, fir	e: rand, reservoir	nearby	1			
Benchmark use	Benchmark used for comparison: Ecolog	Ecological Reference Area	(ERA number)	or Site/Soil	Description and/or experience			
Part 2. Indicator Rating:	ator Rating:							
Indicator:	1. Extreme	2. Moderate to Extreme	3. Moderate	4. Slight to Moderate	5. None to Slight		Hydrologic	
1. Rills	Rill formation is severe and well Rill formation is moderately defined throughout most of the area	Rill formation is moderately active and well defined throughout most of the area	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	No recent formation of rills; old rills have biunted or muted features.	Current or past formation of rills as expected for the site	9	9	
Comment								2352
2. Water Flow Patterns	Extensive and numerous; unstable with active erosion; usually connected.	More numerous than expected; deposition and cut areas common; occasionally connected.	Nearly matches what is expected for the site; erosion is minor with some instability and deposition.	Nearly matches what is expected Matches what is expected for the Matches what is expected for the for the site; erosion is minor with some instability and erosion. Flow patterns are stable current soil deposition or erosion.	Matches what is expected for the site, minimal evidence of past or current soil deposition or erosion.	V.	7	
Comments								2.32

3. Pedestals and/or	r Abundant active pedestalling	a. Modernie to Extreme	-	4. Slight to Moderate	5. None to Slight
Terracettes		Moderate active pedestalling; y letracettes common, Some rocks d, and plants are pedestalled with occasional exposed roots.	Slight active pedestalling; most pedestals are in flow paths and interspaces and/or on exposed slopes. Occasional terracettes present.	d formation is rare; some evidence of past pedestal formation especially in water flow patterns and/or on exposed slopes.	
Comments					
4. Bare Ground	Much higher than expected for the site. Bare areas are large and generally connected.	Moderately to much higher than expected for the site. Bare areas are large and occasionally connected.			
Comments	a bit of open area w	STONE	competed.	connected.	
5. Gullies	Common with indications of	4			
o. Guilles	Common with indications of active erosion and downcutting, vegetation is infrequent on slopes and/or bed. Nickpoints and headcuts are numerous and active.	Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headouts are active: downcutting is not apparent.	Moderate in number with indications of active erosion; vegetation is intermittent on slopes and/or bed. Occasional headcuts may be present.	Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.	Drainages are represented natural stable channels; no of erosion with vegetation common.
Соттемя					$\overline{}$
6. Wind-Scoured Blowouts, and/or Deposition Areas	Extensive.	Сотиоп.	Occasionally present.	Infrequent and few.	Matches what is expected for the site.
Солимения					
7. Litter Movement ]	7. Litter Movement Extreme; concentrated around obstructions. Most size classes of litter have been displaced.	Moderate to extreme; loosely  concentrated near obstructions, size classes in scattere bloderate to small size classes of concentrations around litter have been displaced.  Moderate movement of concentrations and in de	f smaller d	Slightly to moderately more than Matches that expected for the expected for the site with only site with a fairly uniform small size classes of litter being distributing of litter.	Matches that expected for site with a fairly uniform distributing of litter.
Comments					
face	Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.	Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.	Significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the sire.	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the site. Stabilizing agents reduced products and/or a biological below expected.	
Соттепія					

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10. 1117113	lá Inva	Comments	Production	Contration	14. Litt	Comments	13. Plant n Decadence	Comments	Structi	Comments	Layer (b surface).	Comments	10. Plant Community Composition Distribution Relative to Infiltration Runoff.	Comments	of De	
ve Frantis	Plante				Amount		nortality/	חנג	12. Functional/ Structural Groups	ents	11. Compaction Layer (below soll surface).	ents	10. Plant Community Composition and Distribution Relative to Inflitration and Runoff.	ents	of Degradation	9. Soil Surface I
Combnate the site	OK TO THE		Less than 20% of potential		Largely absent or dominant calculative to site potential and weather.	- I meter	Dead and/or decadent plants are common.		Number of F/S groups greatly reduced: and/or relative dominance of F/S groups has been dramatically aftered; and/or number of species within F/S groups not expected for the F/S groups dramatically reduced. site, and/or number of species within F/S groups significantly reduced.		Extensive; severely restricts water movement and root penetration.		Infiltration is severely decreased due to adverse changes in plant community composition and/or distribution. Adverse plant cover changes have occurred.		structure near surface is similar to, or more degraded than that in subsurface horizons. No distinguishable difference in subsurface organic matter content.	
Common throughout the site.	18		20 to 40% of potential		Greatly reduced or increased relative to site potential and weather.		Dead and/or decadent plants are somewhat common.		Number of F/S groups reduced; and/or one dominant group and/or one or more subdominant groups replaced by F/S groups not expected for the site, and/or number of species within F/S groups significantly reduced.		Widespread; greatly restricts water movement and root penetration.		Infiltration is greatly decreased due to adverse changes in plant community composition and/or distribution. Detrimental plant cover changes have occurred.		thoughout site. Minimal throughout site. Minimal officerences in soil organic matter content and structure of surface and subsurface layers.	-
Scattered throughout the site.	os exacuted here	production	of potential		Moderately more or less relative to site potential and weather	#	Some dead and/or decadent plants are present.		Number of F/S groups moderately reduced; and/or one or more subdominant F/S groups replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.		Moderately widespread; moderately restricts water movement and root penetration.		Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.		Moderate soil loss or degradation in plant interspaces with some degradation beneath plant canopies. Soil structure is degraded and soil organic matter content is significantly reduced.	e 3. Moderate
Present primarily on disturbed sites.	and the decadence	production	60 to 80% of potential		Slightly more or less relative to site potential and weather.		Slight plant mortality and/or decadence.		Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.		Rarely present or is thin and weakly restrictive to water movement and root penetration.		Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution Plant cover changes have only a minor effect on infiltration.		Some soil loss has occurred and/or soil structure shows signs of degradation, especially in plant interspaces.	4. Slight to Moderate
Rarely present on the site.	of the acileta	production	Exceeds 80% of potential		Amount is what is expected for the site potential and weather.		Plant mortality and decadence inatches that expected for the site.		F/S groups and number of species in each group closely match that expected for the site,		None to minimal; not restrictive to water movement and root penetration		Infiltration and runoff are equal to that expected for the site. Plant cover (distribution and amount) adequate for site protection.		Soil surface horizon intact. Soil structure and organic matter content match that expected for the site.	5. None to Slight
				Total Control of the	B	Contract of the Party of the Pa					5	THE PART OF STREET			W I	Stability
	The state of the s				2	THE PERSON NAMED IN		The state of the s			5		W		W	Hydrologic
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8 s

Indicator	1 Evtuana				
17. Reproductive	A. Dariette	2. Midderate to Extreme	3. Moderate	4. Slight to Moderate	5. None to Slight
Capability of Perennial Plants (native or seeded)	regetative tillers is severely reduced relative to recent climatic conditions.	Capability to produce seed or regenalize titlers is greatly technique to recent chimatic conditions.	Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is only slightly limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is not limited relative to recent climatic conditions.
Comments					
Cal	Found only in protected areas.	I argels theory occurring many			
01.0	very limited suite of functional groups.	in protected areas.  minor component in interspa	ninor component in interspaces continuity is	Evident throughout the site but continuity is broken	Largely intact and nearly matches site capability
Comments					
					Indicator Summary:
					1. Extreme
					2. Moderate to Extreme
					3. Moderate
Attribute Summary:	Circle the unihar that had fin				4. Slight to Moderate
ndicator ratings in t	indicator ratings in the indicator summary section	indicator ratings in the indicator summary section	for each of the three attribute	es relative to the distribution of	the distribution of 5. None to Slight

Obs	ervers: Weaver,	Ma	dee	ท	Roh	ma	5								Date	: 8	2	91			_	Polyc	gon #:	11.1	
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met	er for frame location			7					10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	-		28.5				
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J	unk Allium								-	_						4		_	=		工	40	0.2	0.15	
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+	AAFF				-					Т.	-	T			0	1		0	7	0	0	34	1.7	0.5	08
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Заге	soil without canopy		5	6	4	8	5	4	6	5	0		2	0	기	T		-	工			14.5	0.7	0.45	
Grot	ndcover: (total gro	undo	OVCI	shou	ld eq	ual 1	00%		0 1	31	- maga-	7	4	3	7	31	4	5	4	6	4	840	44,4	1.0	14.4
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	10-24 in.																			<del></del>	~		روبم		7.50
cdre	er >24 in.																								-

Code	Range	Mid-point	Code	Range	Mid-point
S. 16.	0 - 1.0% cover	0.5%	<b>30</b>	55.1 - 65% cover	60.0%
	1.1 - 5.0% cover	3.0%	为	65.1 - 75% cover	70.0%
	5.1 - 15% сочег	10.0%	\$ 15	75.1 - 85% cover	80.0%
12.5	15.1 - 25% cover	20.0%	. 0,	85.1 - 95% cover	90.0%
260.0	25.1 - 35% cover	30.0%	, A. R	95.1 - 99% cover	97.0%
1	35.1 - 45% cover	40.0%		99.1 - 100% cover	99.5%
. 5	45.1 - 55% cover	50.0%	7		

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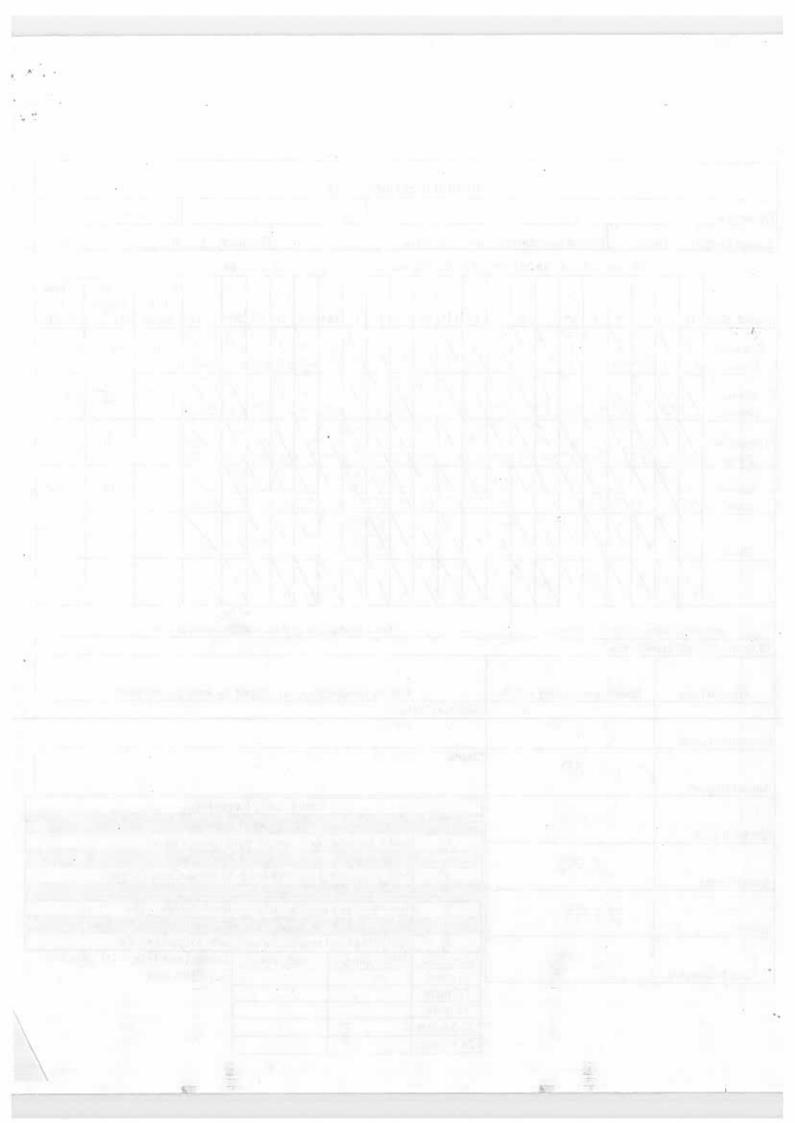
ies common in the evaluation area that were not measured on the transect:

intercept % Cover Circle intercept values that are standing dead material Total Line Length: 30 m Observers: Rohman From 70-86 OPPO 70 5 inter From 6 290 **5459** 2363 2291 1292 613 725 GUSA 2 2893 292 73 2311 52.21 229 То व 3% 23 inter | From (J ٦ ō N 6 Transect 1963 2040 70 으 W, 77 inter Line Intercept From Species Codes: 10 inter From Date: 8/2/01 정 inter From Polygon #: J inter From J inter

From 7 inter From 70 inter From [라 inter From Species Codes: 7 inter From To inter From ٦ ٥ inter From [라 inter

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ransect length: 30 m	eters	I	Fram	nes D	er tr	ansec	t: 2	20 @	20x	50 cı	ກ						Trai	ısect	1	of 1		
0.0 1.5	3.0	4.5	6.0	7.5	9.0	10.5	12.0	13.5	15.0	16.5	18.0	19.5	21.0	22.5	24.0	25.5	27.0	28.5	150	Correc-	D	MD . 1
			- 1															,		tion	Dry weight	Total dry
Frowth form 1* 2	3	4	5	6*	7	8	9	10	11*	12	13	14	15	16*	17	18	19	20*	Total	factor	factor	weigh
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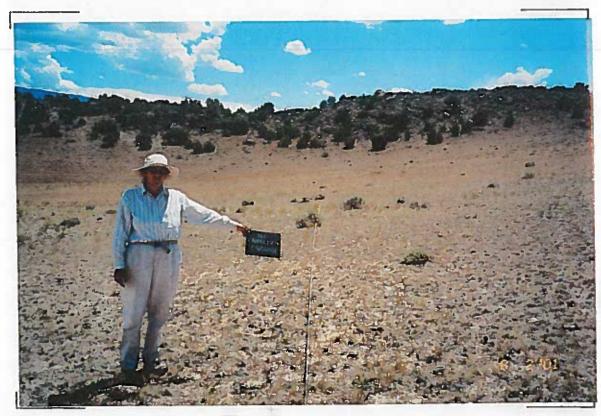
		- -	Functional/Structural Group Worksheet	
Observers: Kohman Madson Weaver	1)116.8/2/01	Ic	Polygon number: 166	
- B		•	Saltdesert Breaks - 406	
Functional/Structural Groups	d Groups		Species List for Functional/Structural Group	Species List for Functional/Structural Group
Name	Potential*	Actual	Plant names - Potential	Plant names - Actual
Trees - deciduous				
Trees - evergreen	N	-	(Utah Juniper)	
Shrubs - sprouting	2		Rabbirbrush	
Shrubs - non-sprouting	D	T - ₩	(Shadscale)	
Shrubs - non-sprouting	M	_	Fourwing, Winterfat, Sage	prickly pear, ATOB
Shrubs - invasive	1	S	snakewee d	
			Salina wildrye, Ricegrass, Squirreltail,	
Cool Season Bunchgrasses	S-14	{	Needle&thread, Sandburg, Threenwn	
Warm Season Bunchgrasses	S	J	Alkali sacaton	
Warm Season Rhizomatous Grasses	D	D (	Galleta ) very decordent	
Cool Season Rhizomatous	M	-	Westernwheat	
Annual Grasses		U		chest homer brown
Forbs - annual		3		plantano
Forbs - perennial	2	4	(Onion) Phlox, Primrose, Princesplume, Globemallow) Segol Cymopteris, Larkspur	-
Forbs - Nitrogen fixing			Locoweed	
Noxious weeds			)	
Biological crusts	S	4	Cyanobacteria, Lichens, Moss	
		1		
D - Dominant = $40$ to $100\%$ composition	sition		* Potential based on ecological/range site description or ecological reference area	ion or ecological reference area
S - Subdominant = 10 to 40% composition	osition			
M - Minor = 2 to 5% composition			Actual is for the area of evaluation	
T - Trace = <2% composition				
Comments: Potential annual production should be 200 pounds/acre	uction shoul	d be 200 p	ounds/acre in an average year	
		34.		
33			*	

XII.

### **CANM Rangeland Health Evaluation Photos**

Allotment Cahone Mess
Polygon# 166
Date 8 / 2 / 20 / 2 / 2001





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# Canyons of the Ancients National Monument

Rangeland Health Evaluation Summary Worksheet - Evaluation Area

Part 1. Area	Part 1. Area of Interest Documentation:	ation:			THE CH		
Observer(s): MADSEN	MADSEN WERVER T	DIN 17N		Date: //8-07-11	Polygon # 11.9		
- 	ARTICLE VAILOR	my Jacket		e			
Location: GP	GPS Int 37"24, 820' lo	, hst. 85 , 101 Buol	Legal NES 6 T3	T 371/J R 19 W	**************************************		
Aerial Photo:	1-2-12	Site Photos · Roll:		Number:  3 ≠/4	1 d ox		(10
Soil Map Unit	Soil Map Unit/Component Name: MAC	ス		Number: 70			
Range/Ecological Site Name:	cal Site Name: Alkah	F127		Number:			
Stope: + 16		Aspect: 64		Topographic Position:	Hillside	Elevation:	5400
Range/Ecologic	Range/Ecological site description, soil survey, and/or ecological reference area:	rvey, and/or ecological re	ference area:				
Surface texture:	Medingary mil :			Parent material:			
Depth: Very s	llow <10"	Shallow 10-20" Moderate 20-40"	0.40" Deen >40" ×		The second secon		
List diagnostic	List diagnostic horizons in profile and depth:		1				
113-18"	landalm mods Calos	2  8 +" CWYDWA CO	TOTAL PROPERTY	ω		4	
Evaluation Are	Evaluation Area Determination:						
1	+ IMP SONCE OF HIM			Parent material: Sand	an o		
Depth: Very s	Very shallow <10" Shallow 10-20"	10-20" X Moderate 20-40"	0-40" Deep >40"				
List diagnostic	List diagnostic horizons in profile and depth:	oth: 1-10 trice	u y′<	Mode) Z B Hall Mark	S Like Sabrichan palane		The state of the s
1 10" - CaC	TO DEMINATE TO	2 12 - Rack		3 58	ज्या भारत माराजा व माराज्या इस्मा प्राप्त	4	
Avg. annual PPT:	T: Cortez 13", Hovenweep 11"		Recent Weather (last 2 years):	Drought 2000	Normal 2001 Wet		
Wildlife Use:	ממעות לומלכת ואמנו	ANNIE SALLE STANKE					
Livestock Use:	エンピル・ ハンナナー						
Offsite influenc	Offsite influences on area and significance e.g.	e.g. roads, chainings, fire:	End new bas for	and marby			
Benchmark use	Benchmark used for comparison: Ecolog	Ecological Reference Area	(ERA number)	or Site/Soil Description a	Description and/or experience		
Part 2. Indica	Indicator Rating:						
Indicator:	1. Extreme	2. Moderate to Extreme	3. Moderate	4. Slight to Moderate	5. None to Slight		Hydrologic
1. RHs	Rill formation is severe and well defined throughout most of the area	Rill formation is moderately active and well defined throughout most of the area	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	No recent formation of rills; old rills have blunted or muted features.	Current or past formation of rills as expected for the site	Simbility 17	Function
Comments							72
2. Water Flow Patterns	Extensive and numerous; unstable with active erosion; usually connected.	More numerous than expected; deposition and cut areas common; occasionally connected.	Nearly matches what is expected Matches what for the site; crosion is minor site; some evic with some instability and crosion. Flow deposition.		is expected for the Matches what is expected for the dence of minor site, minimal evidence of past or patterns are stable current soil deposition or erosion.	2)	&
Comments							

present, entering expectally	Occasional terraceites
and/or on a	in water flow patterns exposed slopes.
	in water flow patterns exposed slopes.
slopes	her

...

16. Invasive Plants	Comments	15. Annual Production	Comments	14. Litter Amount	Comments	13. Plant mortali Decadence	Comments	12. Functional/ Structural Groups	Comments	11. Compaction Layer (below soll surface).	Comments	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff.	Comments	of Degradation	9: Soil Surface
is Dominate the site		Less than 20% of potential production		Largely absent or dominant relative to site potential and weather.		13. Plant mortality/ Dead and/or decadent plants are Decadence common.		Number of F/S groups greatly reduced: and/or relative dominance of F/S groups has been dramatically altered; and/or number of species within F/S groups dramatically reduced		Extensive; severely restricts water movement and root penetration.		Infiltration is severely decreased due to adverse changes in plant community composition and/or distribution. Adverse plant cover changes have occurred.		of Degradation  structure near surface is similar  to, or more degraded than that in  subsurface horizons. No  distinguishable difference in  subsurface organic matter  content.	Loss Soil surface horizon about Si
Common throughout the site.		20 to 40% of potential		Greatly reduced or increased relative to site potential and weather.		Dead and/or decadent plants are somewhat common.		Number of F/S groups reduced; and/or one dominant group and/or one or more subdominant groups replaced by subdominant groups replaced by F/S groups not expected for the sate; and/or number of species within F/S groups significantly reduced.		Widespread; greatly restricts water movement and root penetration.		Infilitation is greatly decreased the due to adverse changes in plant community composition and/or distribution. Detrimental plant cover changes have occurred.		of Soil loss or degradation severe throughout site. Minimal odifferences in soil organic matter content and structure of surface and subsurface layers.	
Scattered throughout the site.	propertion	of potential		Moderately more or less relative to site potential and weather		Some dead and/or decadent plants are present.		Number of F/S groups slight moderately reduced; and/or one reduced; and/or relative or more subdominant F/S groups dominance of F/S groups has replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.  Number of F/S groups slightly reduced; and/or number of species within F/S groups slightly reduced.		Moderately widespread; moderately restricts water movement and root penetration.		Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.		Moderate soil loss or degradation in plant interspaces et with some degradation beneath plant canopies. Soil structure is degraded and soil organic matter content is significantly reduced.	_
Present primarily on disturbed sites.	production	of potential		Slightly more or less relative to site potential and weather.		Slight plant mortality and/or decadence.		Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.		Rarely present or is thin and weakly restrictive to water movement and root penetration.		Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.		Some soil loss has occurred and/or soil structure shows signs of degradation, especially in plant interspaces.	4. Slight to Moderate
Rarely present on the site.	production	Exceeds 80% of potential		Amount is what is expected for the site potential and weather.		Plant mortality and decadence inarches that expected for the		F/S groups and number of species in each group closely match that expected for the site.		None to minimal; not restrictive to water movement and root penetration		Infiltration and runoff are equal to that expected for the site. Plant cover (distribution and amount) adequate for site protection.		Soil surface honzon intact, Soil structure and organic matter content match that expected for the site.	5. None to Slight
			SECTION SECTION		SCHOOL STREET					5	MARKET STATES				SoiVSite Stability
	18 C. S.			e)	SALES NATIONAL		さない できばる			Ċ1		20,			Hydrologic Function

Indicator:	1. Extreme	2. Muderate to Extreme		4. Slight to Moderate	5. None to Slight	10000	Soll/Site
	regetative tillers is severely reduced relative to recent climatic conditions.	Capability to produce seed or vegetance officer is greatly reduced relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is only slightly vegetative tillers is not limited limited relative to recent relative to recent climatic conditions.	Capability vegetative relative to conditions.	Capability to produce seed or vegetative tillers is not limited relative to recent climatic conditions.	to produce seed or stillers is not limited recent climatic seed.
Comments							
18. Biological Crusts	Found only in protected areas, very limited suite of functional groups.	Largely absent occurring mostly in protected areas and with a in protected areas.	In protected areas and with a Evident throminor component in interspaces continuity is	Evident throughout the site but continuity is broken	Largely	Largely intact and nearly matches site capability	intact and nearly site capability
Commenus	Daniel A presumed	Social Carl Structs	N. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				
					Indi	Indicator Summary:	cator Summary: SolVSite Hydrologic
					1. Extreme	eme	
					2. Mod	2. Moderate to Extreme	erate to Extreme
					3. Mo	Moderate	derate ~~
ttribute Summary:	Circle the unihou that have fit				4. Slig	Slight to Moderate	ht to Moderate
dicator ratings in t	indicator ratings in the indicator summary section	indicator ratings in the indicator summary section	for each of the three attribute	s relative to the distribution of 5. None to Slight	5. Non	e to Slight	e to Slight 2,
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0}	1.1 - 5.0% cover	3.0%	$\mathcal{J}$	65.1'- 75% cover	70.0%
ij	5.1 - 15% cover	10.0%		75.1 - 85% cover	80.0%
<u>*</u> .	15.1 - 25% cover	20.0%	19	85.1 - 95% cover	90.0%
	25.1 - 35% cover	30.0%	Δ	95.1 - 99% cover	97.0%
4.	35.1 - 45% cover	40.0%	X	99.1 - 100% cover	99.5%
: S.	45.1 - 55% cover	50.0%	W. 1755	400000	

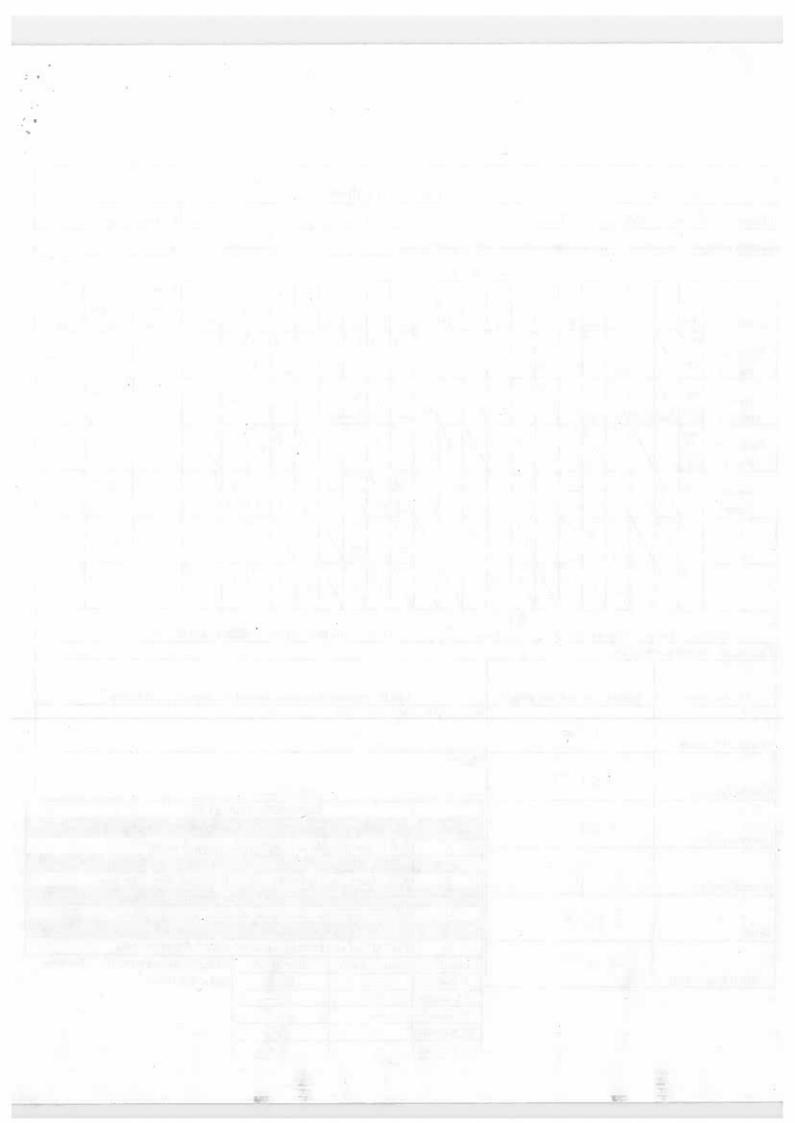
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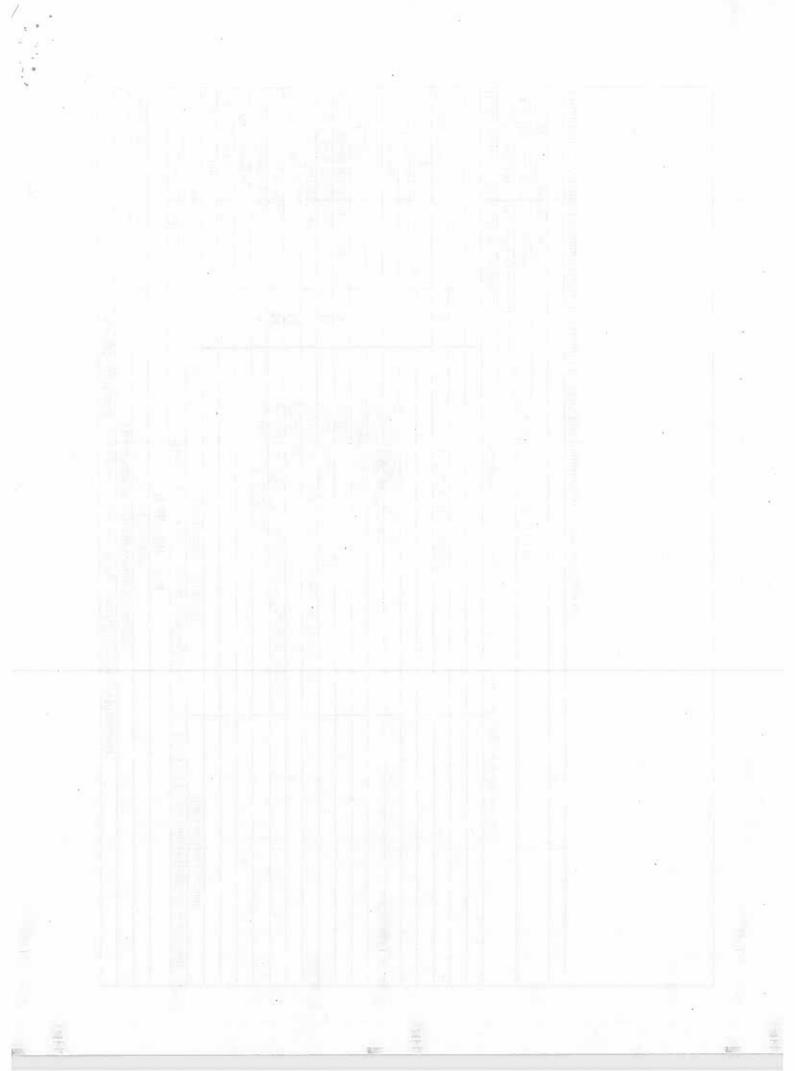
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Growth form	-7/	2	3	4	5	07	/	8	9	10	/	7	13	14	1.7	16*	1/	18	19	20*. /	Total	factor	factor	weight
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Annual Grasses	2/ /3	12	2	Vi	/a	2/	/1	4	/3.	3	5/4	/2	2	2	2/	/2	4	/3	5	3	10/51	1.1	,95	53.29
Perennial Forbs	Y		7	/				/															.90	.9
Annual Forbs		7	/	/1	/2	2/	/	/2	/2	/3	2/2	7	/2	/	3/2	12	/		/	12	30.5	1.14	.85	29.55
Shrub	/	Ź	7	Ż	7	3/2	7	Ž	7	Ž	7	7	7	7	7/2	7	7		7	7	10/8	1.67	.50	6.68
Shrub	7	7	7	7	7	7		7	7	7	7	7	7		7	7	7		7	7	7			
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* Location fo									l			-											-	, *
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Annual Gras	ses			1	3-	7.70	)			Shr	ubs:		100.00				127.64-1	المراجدون راء	ale		10000			
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Perennial Fo	rhe			4	,0	1					Rati	og -		Ħ,	- Proprieta	W. S. Landson	ALC: UNKNOWN	1700	THE RESERVE OF THE PERSON NAMED IN		-	ialility c	lassi:	
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Shrub			7 7 7		- 27		-		_	╫	6	_										ipping cy		
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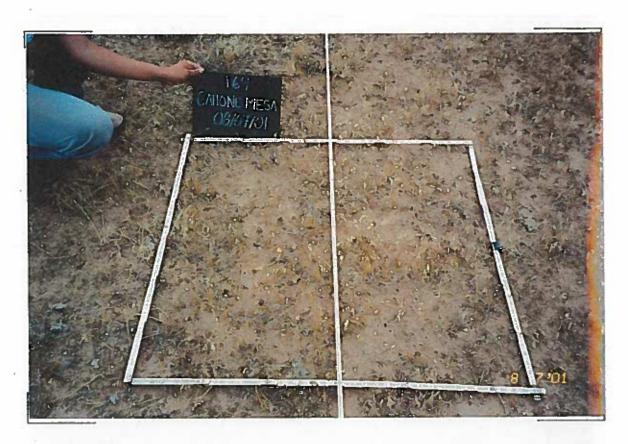


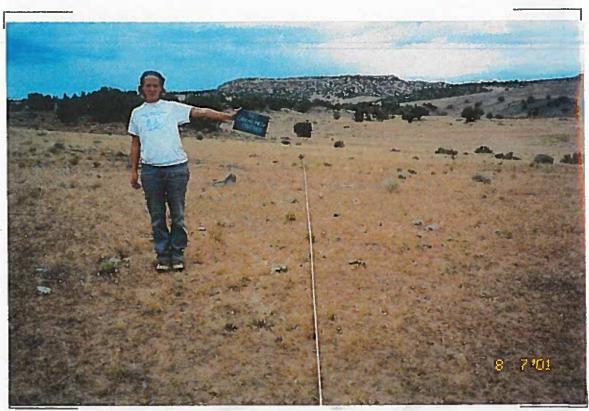
	Rangel	land Hea	Rangeland Health Assessment - Canyons of the Ancients National M.  Functional/Structural Group Worksheet	nal Monument	
Observers: MAR. SELL REMARK.	Date: A 10-1	£	Polygon number: \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
REDAKSM ,			Alkali Flat - 414		
Functional/Structural Groups	Scho.L		Species List for Functional/Structural Group	Species List for Functional/Structural Group	
Name	Potential*	Actual	Plant names - Potential	Plant names - Actual	
Trees - deciduous					
Trees - evergreen		+		1111111111	Walks.
Shrubs - sprouting					
Shrubs - non-sprouting	S	3	Grensewood\Shadscale>		
Shrubs - non-sprouting	N.	ナート	Fourwing, Winterfat, Sage: Greenmolly, Spiny hopsage	17, 181, man of the burner Branchances	100
Shrubs - invasive	M	크	Snakeweed		Claret out
Cool Season Bunchgrasses	S	ᅱ	Squitteltail, Needle&thread, Indian rice, Three-awn	Shidneyn & hours with	Carres
Warm Season Bunchgrasses	a	-{	Alkali sacatonxSand dropseed		
Warm Season Rhizomitous Grasses	S	M-S. 1	Galleta		
Annual Grasses	Ί.	J	Sixweeks fescue	Chief avacs Town 15 both	
Forbs - annual	T	3	Indian wheat, Pepperweed	Buck 15th 11 ind to State built, Horn had	Draba,
Forbs - perennial	N	7	Globemallow; Cymopteris	Calicharte	Ortion Orthon
Forbs - Nitrogen fixing					
Noxious weeds					
Biological crusts	S	7-19	Cyanobacteria, Lichens, Noss		
D - Dominant = $40$ to $100\%$ composition	sition		* Potential based on ecological/range site description or	ion or ecological reference area	
S - Subdominant = 10 to 40% composition	osition	101			
M - Minor = 2 to 5% composition			Actual is for the area of evaluation		
T - Trace = <2% composition					
Comments: Potential annual production should be 650 - 800 pounds/acre	uction shou	ld be 650	- 800 pounds/acre in an average year		
	e				2477
			•		
					2
·				199	

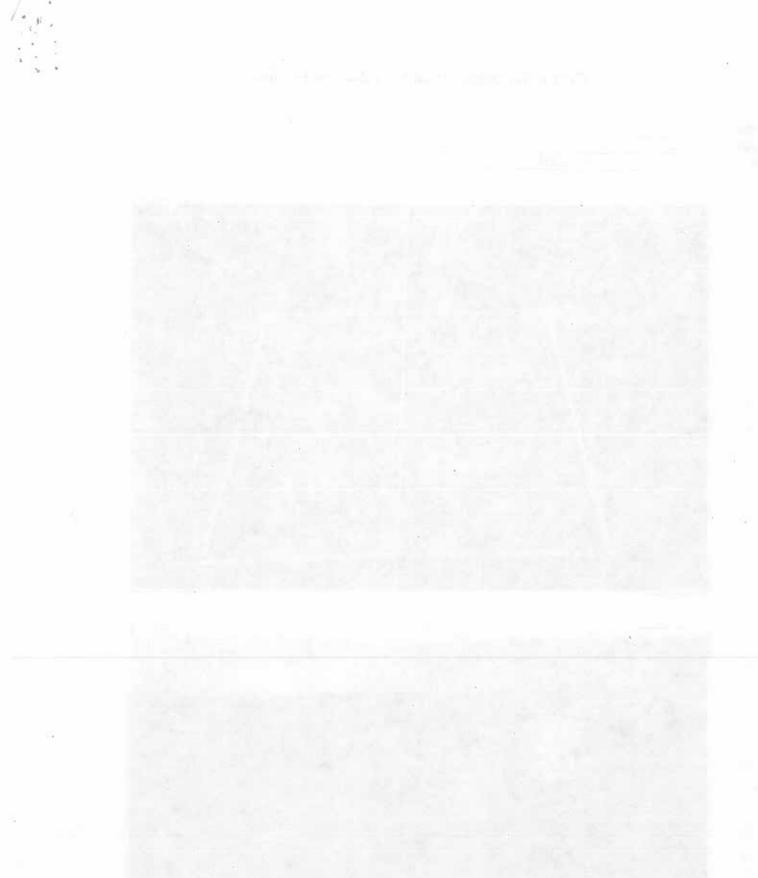


### **CANM Rangeland Health Evaluation Photos**

Allotment Polygon # Date Cahone Mesa 169 8/7/2001







## Canyons of the Ancients National Monument

art 1. Area of Interest Documentation:  bserver(s): Rohman Modeen (4) eaver  both both board (4) line (4) eaver (5)   Date: 2/5/5/7   Polygon # 170	Rangeland Health Evaluation Summary Worksheet	lary Worksheet - Ey	aluation Area	
	art 1. Area of Interest Documentation:			
	Modern	Data-ole /~!	Polition #	1
	lotment (Cahono Mose on shoto board ) Yellow 1-1-1	Doctions	A CI BOURT OF C	

				The second second second			
1	Rohman Modern L	) PONPY		Date: 6/8/01	Polygon# 170		
Allotment	aliano Meso an photo	board Yellow !	ncket	Pasture:	- 1		
Location: GP	GPS lat 37: 24 .792 1 10	1 L81-65, 801 Buop	Legalww S6 T34	THAR PW			
Aerial Photo:	1-2-12	Site Photos - Roll: /7		Number: / 7 /8			
Soil Map Unit	Soil Map Unit/Component Name: Cla			Numb			
Ecolo	Salte	sort Breaks		Number: 406			
Slope: 1->	70/0	Aspect: 206°		Topographic Position:	hench	Elevation: SSOO	:5500'
Range/Ecologic	Range/Ecological site description, soil survey, and/or ecological reference area:	rvey, and/or ecological re	ference area:				
Surface texture: Very	of huats had ex	y Loan		Parent material: Residuum	hum from Movisson	diale	
Depth: Very s	Very shallow <10" X Shallow	Shallow 10-20" X Moderate 20-40"	0-40" Deep >40"				
List diagnostic	List diagnostic horizons in profile and depth:	pth:					
Evaluation Are	1 Rock fragment lookent 5.60% 0-3 in	2 Gypsum Crystals	9-18in	3 Weathourd Morrison	State 6-20 in	4	
Surface texture: Very 5 hour	· Very Stony Clay	loam.		Parent material: Sandstone	stone - Callinging	,	
Depth: Very s	Very shallow <10" Shallow 10-20"	10-20" X Moderate 20-40"	0-40" Deep >40"		- mak+	-	
List diagnostic	List diagnostic horizons in profile and depth:			-	1		000100
1/1- 10/14	G(0;	2 10" decomposins	5 sandstone	3		4	
Avg. annual PP	Avg. annual PPT: Cortez 13", Hovenweep 11"	II"	Recent Weather (last 2 years):	Drought 2000	Normal 2001 Wet	-	
Wildlife Use:	Minimal						-
Livestock Use:	heavy						
Offsite influence	Offsite influences on a ea and significance e.g. roads, chainings, fire:	e.g. roads, chainings, fir	road nearby,	ferce runs thru	polygon		
Benchmark use	Benchmark used for comparison: Ecolog	Ecological Reference Area	_ (ERA number)	or Site/Soll Description a	Description and/or experience	*1	
Part 2. Indicator Rating:	tor Rating:						
Indicator:	1. Extreme	2. Moderate to Extreme	3. Moderate	4. Slight to Moderate	5. None to Slight		Hydrologic
1. Rills	Rill formation is severe and well Rill formation is moderately defined throughout most of the area	Rill formation is moderately active and well defined throughout most of the area	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	No recent formation of rills; old rills have blunted or muted features.	Current or past formation of rills as expected for the site		CT RES
Соттель							

Patterns

unstable with active erosion; Extensive and numerous;

deposition and cut areas common; occasionally

deposition.

with some instability and for the site; crosion is minor More numerous than expected;

Nearly matches what is expected Matches what is expected for the Matches what is expected for the

site; some evidence of minor

site; minimal evidence of past or

(1)

erosion. Flow patterns are stable current soil deposition or and short erosion.

usually connected.

2. Water Flow

Comments

Much higher than expected for hoderately to much higher than the site. Bare areas are large and expected for the site. Bare areas are large and expected for the site. Bare areas are large and expected for the site. Bare areas are large and occasionally connected.  Common with indications of active erosion, includes and occasionally connected.  Common with indications of active erosion, indications of active erosion, vegetation is infermittent on slopes and/or bed. Headcuts are numerous and active. downcutting is not active. downcutting is not apparent.  Fed Extensive.  Extreme; concentrated around obstructions. Most size classes of litter have been displaced.  Extremely reduced throughout the site. Biological stabilization plant canopy interspaces and in agents including organic matter moderately reduced beneath absent.  Significantly reduced beneath in plant canopies. Stabilizing agents present only in isolated patiches.	Indicator:  3. Pedestals and/or Terracettes		2. Moderate to Extreme Moderate active pedestalling; terracettes common. Some rocks id. and plants are pedestalled with	S 6	3. Moderate Slight active pedestalling; more pedestals are in flow paths and interspaces and/or on exposed	
for Moderately to much higher than e and expected for the site. Bare areas are large and occasionally connected.  Moderate to common with ing. indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are and active downcutting is not apparent.  Common.  Common.  Common.  Common.  Comcentrated near obstructions. Si Moderate to small size classes of content of the concentrated near obstructions. Si Moderate to small size classes of content of the concentrated near obstructions. Si Moderately reduced beneath in plant canopy interspaces and in plant canopies. Stabilizing agents present only in isolated patches.	expos	and plants are pedestalle ed plant roots are commu	y terracettes common, Some rockid, and plants are pedestalled with occasional exposed roots.	G	pedesials are in flow paths and interspaces and/or on exposed slopes. Occasional remacettes present.	- A
and expected for the site. Bare areas are large and occasionally connected.  It Moderate to common with ing. indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are and active: downcutting is not apparent.  Common.  Significantly reduced in most blant canopy interspaces and in plant canopies. Stabilizing agents present only in isolated patches.	Much higher that	expected for	_1. 1			
of Moderate to common with ingr. indications of active erosion; vegetation is intermittent on its slopes and/or bed. Headcuts are and active downcutting is not apparent.  Common.  Com	the sig	higher than expected for e. Bare areas are large an thy connected.			n expect are of adically	n expected Slightly to moderately higher are of than expected for the site. Bare adically areas are small and rarely connected.
Slopes and/or bed. Headcuts are and active: downcutting is not apparent.  Common.  Common.  Common.  Concentrated near obstructions.  Moderate to small size classes of litter have been displaced.  Significantly reduced in most plant canopy interspaces and plant canopies. Stabilizing agents present only in isolated patches.	4 4	Common with indications of active crosson and downcutting vegetation is infrequent on	Moderate to common with indications of active erosion; vegetation is intermittent on	Moderate in number with indications of active erosion, vegetation is ratermittent on	r with e erosion;	
Common.  Common.  Moderate to extreme; loosely concentrated near obstructions. Moderate to small size classes of litter have been displaced.  Significantly reduced in most on plant canopy interspaces and plant canopies. Stabilizing agents present only in isolated patches.		and headcuts are numerous and active.	ts are		Occasional resent.	Occasional nickpoints, or bed erosion.
ment Extreme; concentrated around obstructions. Most size classes of litter have been displaced.  Extremely reduced throughout the site. Biological stabilization and biological crusts virtually absent.  Common.  Moderate to extreme; loosely concentrated near obstructions, bloderate to small size classes of litter have been displaced.  Inter have been displaced.  Inter have been displaced.  Inter have been displaced.  Inter have been displaced in most plant canopy interspaces and plant canopies. Stabilizing agents present only in isolated patches.						
obstructions. Most size classes of litter have been displaced.  Extremely reduced throughout the site. Biological stabilization and biological crusts virtually absent.  Noderate to extreme; loosely concentrated near obstructions. Noderate to small size classes of litter have been displaced.  Extremely reduced throughout plant canopy interspaces and plant canopies. Stabilizing agents present only in isolated patches.	1 28	Extensive.		Occasionally present		
obstructions. Most size classes of litter have been displaced.  Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.  Noderate to extreme; loosely concentrated near obstructions. Noderate to small size classes of litter have been displaced.  Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.						int Infrequent and few. Matches what is expected for the site.
Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.  Noderate to small size classes of litter have been displaced.  Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.		Extreme; concentrated around obstructions. Most size classes		Moderate movement of smaller		Infrequent and few,
Extremely reduced throughout Significantly reduced in most the site. Biological stabilization plant canopy interspaces and agents including organic matter moderately reduced beneath and biological crusts virtually plant canopies. Stabilizing absent.  Patches.			4	THE CANADA IN COMP	t of smaller	Infrequent and few,
the site. Biological stabilization plant canopy interspaces and agents including organic matter moderately reduced beneath and biological crusts virtually plant canopies. Stabilizing absent.  Significantly reduced in most Significantly reduced in most plant canopy interspaces and plant canopies. Stabilizing agents present only in isolated patches.	L		ol coch of	obstructions and in depressions.	f smaller	Infrequent and few.  Infrequent and few.  Is smaller Slightly to moderately more than expected for the site with only small size classes of litter being displaced.
	8. Soll Surface (E Resistance to th Erosion ar		90	concentrations around in a	f smaller	Infrequent and few.  Infrequent and few.

Comments	15. Annual Production	Comments	14. Litter Amount	Comments	13. Plant mortality/ Decadence	Comments	Structural Groups	Comments	11. Compaction Layer (below soil surface).	Comments	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff.	Comments	of Degradation	9. Soil Surface
	Less than 20% of potential production		unt Largely absent or dominant relative to site potential and weather.		ality/ Dead and/or decadent plants are common.			L	soil extensive; severely testricts water movement and root penetration.		Č		0 1	9. Soil Surface Loss Soil surface horizon absent Soil
	20 to 40% of potential production		Greatly reduced or increased relative to site potential and weather.		Dead and/or decadent plants are somewhat common.		Number of F/S groups reduced; and/or one dominant group and/or one or more subdominant groups replaced by F/S groups not expected for the site, and/or number of species within F/S groups significantly reduced.		Widesprend; greatly restricts water movement and root penetration.					_
					Some dead and/or decadent plants are present.		Number of F/S groups moderately reduced; and/or one or more subdominant F/S groups not replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.		Moderately widespread; moderately restricts water movement and root penetration.					_ c
					t mortality and/or		Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.		Rarely present or is thin and weakly restrictive to water movement and root penetration.				- 4 - 7	4. Slight to Moderate
production	Exceeds 80% of patential		Amount is what is expected for the site potential and weather.	SIC	Plant mortality and decadence imatches that expected for the		F/S groups and number of species in each group closely match that expected for the site.		None to minimal; not restrictive to water movement and root penetration		Infiltration and runoff are equal to that expected for the site.  Plant cover (distribution and amount) adequate for site protection.		Soil surface horizon intact, Soil surface horizon intact, Soil structure and organic matter content match that expected for the site.	5. None to Slight
					1				U	· · · · · · · · · · · · · · · · · · ·				Soil/Site
		5	2						5.		2)		W	Hydrologic
	1. production	Less than 20% of potential production	Less than 20% of potential 20 to 40% of potential 40 to 60% of potential 60 to 80% of potential production production	Largely absent or dominant relative to site potential and weather.  Creatly reduced or increased weather.  Creatly reduced or increased relative to site potential and weather weather.  Continue to site potential and weather weather.	Largely absent or dominant relative to site potential and weather.  Greatly reduced or increased weather relative to site potential and weather.  Greatly reduced or increased to site potential and weather site potential and weather.  Moderately more or less relative Slightly more or less relative to site potential and weather.  Site potential and weather.  Site potential and weather.  Site potential and weather.	common.  Largely absent or dominant relative to site potential and weather.  Less than 20% of potential production  Dead and/or decadent plants are   Some dead and/or decadent   Slight plant mortality and/or	Armount Largely absent or dominant relative to site potential and weather.  Less than 20% of potential production  Dead and/or decadent plants are   Some dead and/or decadent   Slight plant mortality and/or	Number of F/S groups greatly   Number of F/S groups reduced; and/or relative dominance of F/S groups has been dramatically altered; and/or one or more subdominant groups or more subdominant F/S groups has been dramatically altered; subdominant groups replaced by replaced by F/S groups not expected for the expected for the expected for the site; and/or number of species within F/S groups not expected for the expected for the site; and/or within F/S groups significantly groups moderately reduced.    Dead and/or decadent plants are common.   Dead and/or decadent plants are plants are present.   Slight plant mortality and/or decadent common common   Dead and/or decadent plants are present.   Slight plant mortality and/or decadent site potential and weather.   Dead and/or decadent plants are present.   Slightly more or less relative to site potential and weather.   Dead and/or decadent plants are potential production   Decadent p	Number of F/S groups greatly is defined; and/or relative dominance of F/S groups has been dramatically altered; and/or number of species within F/S groups not expected for the subdominant expected for the file; and/or number of species within F/S groups not expected for the expected by F/S groups not expected for the expected for the site; and/or number of species within F/S groups not expected for the expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.  Singht plant mortality and/or decadent plants are present.  Singht plant mortality and/or plants are present.  Singhtly more or less relative to site potential and weather.  Less than 20% of potential production production production production  Potential production production production  Number of F/S groups and/or one reduced; an	Rarely restricts water weekly restricts water movement and root penetration.  Rarely present or is thin and moderately restricts water movement and root penetration.  Rarely present or is thin and moderately restricts water movement and root penetration.  Rarely present or is thin and moderately restricts water movement and root penetration.  Rarely present or is thin and moderately restricts water movement and root penetration.  Rarely present or is thin and moderately restricts water movement and root penetration.  Rarely present or is thin and moderately restricts water movement and root penetration.  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Number of F/S groups dominant expected for the site; and/or number of species within F/S groups not expected for the site; and/or number of species within F/S groups and expected for the site; and/or number of species within F/S groups and expect	tion and community composition and/or communi	Infiltration is neverely decreased in plant due to adverse changes in plant reduced use to adverse changes moderately from and/or community composition and/or in plant community composition changes in plant community composition and/or in plant community composition changes in plant community composi	and and the function are are unified: is juin.)  An entired expected than that one developes the shallmast of the content of shall and the shall have a designed and the shall be designed to the sh

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Code	Range	Mid-point	Code	Range	Mid-point
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505	1.1 - 5.0% cover	3.0%	1	65.1 - 75% cover	70.0%
્રા મુખ્ય	5.1 - 15% cover	10.0%		75.1 - 85% cover	80.0%
2.3	15.1 - 25% cover	20.0%	9)	85.1 - 95% cover	90.0%
Sec. 1	25.1 - 35% cover	30.0%	NA.	95.1 - 99% cover	97.0%
34, 31	35.1 - 45% cover	40.0%		99.1 - 100% сочег	99.5%
55.4	45.1 - 55% cover	50.0%		193	

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Species code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	SCC	ACC	% Freq	c
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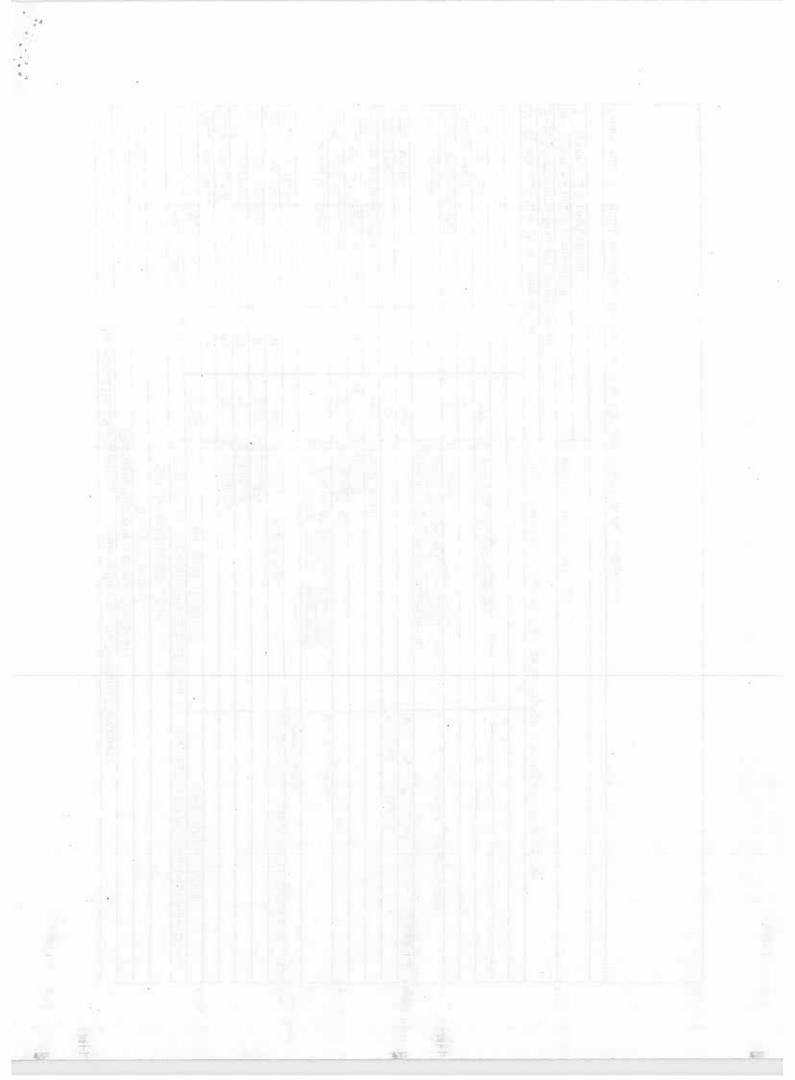
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* Location fo		_	_	_											proc						n total (	ary 111.		
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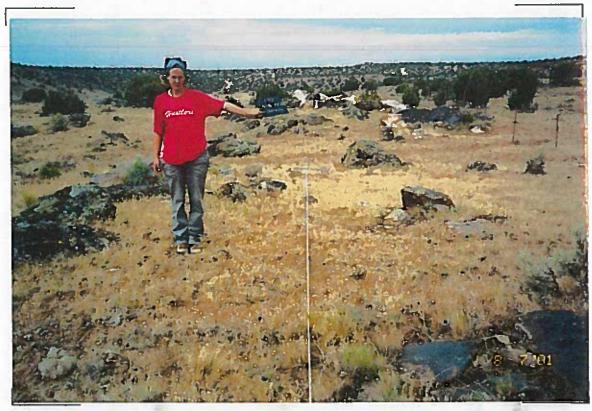
T. (Utah Juniper)  T. (Rabbiibrush)  T. (Rabbiibrush)  T. (Rabbiibrush)  T. (Shadscale)  T. (Alkali sacaton)  M. (Seedle & thread, Sandburg) (Three awn)  Alkali sacaton)  M. (Sallena)  M. (Sandburg) (Three awn)  M. (Sand		
Actual Plant names - Potential Plant names - Actual Turb Juniper)  T. (Utah Juniper)  T. (Abbitbrush)  M. (Shadscall)  M. (Shadscall)  M. (Shadscallow)  M. (Seedle&threigh.(Sandburg.)(Inceasin)  M. (Seedle&threigh.(Sandburg.)(Inceasin)  M. (Saltina wildrye, Ricegrass, Squirreltail)  M. (Seedle&threigh.(Sandburg.)(Inceasin)  M. (Saltina wildrye, Ricegrass, Squirreltail)  M. (Seedle&threigh.(Sandburg.)(Inceasin)  M. (Saltina wildrye, Ricegrass, Squirreltail)  M. (Saltina wildrye, Ricegrass, Squirreltail)  M. (Seedle&threigh.(Sandburg.)(Inceasin)  M. (Saltina wildrye, Ricegrass, Squirreltail)  M. (Saltina wildrye, Ricegrass, Squirr	uction should	Comments: Potential annual pro-
Actual Plant names - Potential Plant names - Actual		T - Trace = <2% composition
Actual Plant names - Potential Plant names - Actual  T (Itah Juniper)  T (Rabbitbrush)  M (Shadscale)  T- M (Fourwing, Winterfat, Sage Salina wildrye, Ricegrass, Equirreltail)  M (Seedle&thread, Sandburg, Threeawn)  M (Seedle&thread, Sandburg, Sandburg, Muthanala, Alleration, Sandburg, Muthanala, Alleration, Seedle Se		M - Minor = 2 to 5% composition
Actual Plant names - Potential Plant names - Actual  T Utah Juniper .  Rabbirbrush .  M Shadseale .  T - M Fourwing, Winterfat, Sage .  M Salina wildrye, Ricegrass, Squirreltail .  M Veedle&thread Sandburg Threeawn .  M Veedle&thread Sandburg Threeawn .  T Alkali sacaton .  M Calleta .  D Westernwheat .  Chaak August .  Chaak	osition	S - Subdominant = 10 to 40% composition
Actual Plant names - Potential Plant names - Actual  T Utah Juniper)  T Rabbitbrush  M Shadscale  T - M Fourwing, Winterfat, Sage  M Salina wildrye, Ricegrass, Squirreltail)  M Weedleschtread, Sandburg, Threeawn  M Salina wildrye, Ricegrass, Squirreltail)  M Weedleschtread, Sandburg, Threeawn  M Salina wildrye, Ricegrass, Squirreltail)  M Salina wildrye, Ricegrass, Squirreltail)  M Weedleschtread, Sandburg, Threeawn  M Salina wildrye, Ricegrass, Squirreltail)  M Weedleschtread, Sandburg, Threeawn  M Salina wildrye, Ricegrass, Squirreltail)  M Weedleschtread, Sandburg, Threeawn  M Salina wildrye, Ricegrass, Squirreltail)  M Weedleschtread, Sandburg, Threeawn  M Shadscale  Sh	ition	D - Dominant = 40 to 100% composition
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush)  M (Shadscale)  T-M (Shadscale)  T-M (Fourwing, Winterfat, Sage Salina wildrye, Ricegrass, Equirreltail)  Meedle&thread.(Sandburg, Threeawn)  M-S (Salina wildrye, Ricegrass, Equirreltail)  M-S (Salina wildrye, Ricegrass, Equirreltail)  Meedle&thread.(Sandburg, Threeawn)  M-S (Salina wildrye, Ricegrass, Equirreltail)  Molecule &thread.(Sandburg, Threeawn)  Molecule &thread. Sandburg, Threeawn)  Molec		
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  T (Shadscale)  T-M (Shadscale)  T-M (Shadscale)  T-M (Shadscale)  T-M (Shadscale)  M-S (Salina wildrye, Ricegrass, Equirreltail)  Meedle & thread, (Sandburg, Threeawn)  Meedle & thread, (Sandburg, Threeawn)  M-S (Galleta)  M-S (Galleta)  M-S (Galleta)  M-S (Galleta)  Mesternwheat  D (Union, (Phiox) Printose, Printoseplume, Clobemallows (Sego) Cymopteris), Larkspur  Locoweed  M (Union hasteriak) ichemallows  M (Union hast		
Actual Plant names - Potential Plant names - Actual  (Itah Juniper) (Itah Juniper	V.	Biological crusts
al* Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush)  M (Shadscale)  T-M Fourwing, Winterfat, Sage  M-S (Salina wildrye, Ricegrass, Squirreltail)  Needle&thread (Sandburg) Threeawn  M (Salina wildrye, Ricegrass, Squirreltail)  No-S (Salina wildrye, Ricegrass, Squirreltail)  M (Salina wildrye, Ricegra		Noxious weeds
Actual Plant names - Potential Plant names - Actual Tabbitonish Plant names - Actual Plant na		Forbs - Nitrogen fixing
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush)  T (Shadscale)  T-M (Shadscale)  T-M (Shadscale)  T-M (Shadscale)  M-S (Salina wildrye, Ricegrass, Squirreltail)  M (Seedle&thread, Sandburg) (Threeawn)  M-S (Galleta)  Mesternwheat  D (Chea + 1000)  Disho DER (Crawchil, God, Ollysum,	М	Forbs - perennial
Actual Plant names - Potential Plant names - Actual T (Utah Juniper)  T (Rabbitbrush.)  T-M (Shadscale)  T-M (Shadscale)  M-S (Salina wildrye, Ricegrass, Squirreltail)  M (Veedle&thread.(Sandburg, Threeawn)  T (Alkali sacaton)  M-S (Galleta)  Westernwheat  Chaa + 1000		Forbs - annual
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush.)  T- M (Shadscale)  T- M (Shadscale)  M-S (Salina wildrye, Ricegrass, Equirreltail)  M (Seedle&thread, Sandburg, Threeawn)  M (Salina wildrye, Ricegrass, Equirreltail)  Mushpingrass  Mushpingrass  Mushpingrass  Westernwheat		Annual Grasses
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbifbrush)  T- M (Shadscale)  T- M Fourwing, Winterfat, Sage  M- S  Salina wildrye, Ricegrass, Equirreltail)  M (Veedle&thread.(Sandburg, Threeawn)  M- S (Galleta)  Multippngrass	N	Cool Season Rhizomatous
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush)  T- M (Shadscale)  T- M Fourwing, Winterfat, Sage  M-S Salina wildrye, Ricegrass, Equirreltail)  M (Seedle&thread, Sandburg, Threeawn)  M (Seedle&thread, Sandburg, Threeawn)  Multiprograss	D	Warm Season Rhizomatous Grasses
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush.  M-S (Shadscale)  M-S (Salina wildrye, Ricegrass, Squirreltail)  Meedle&thread.(Sandburg, Threeawn)  Muthon and 25	S	Warm Season Bunchgrasses
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush  M-S Snakeuse &	NI-S	Cool Season Bunchgrasses
Actual Plant names - Potential Plant names - Actual  T (Utah Juniper)  Rabbitbrush)  M (Shadscale)  T-M Fourwing, Winterfat, Sage  Saithrush Ann Mah, Aragupah yu		Shrubs - invasive
Actual Plant names - Potential  (Utah Juniper)  (Rabbitbrush)	K	Shrubs - non-sprouting
al* Actual Plant names - Potential  (Utah Juniper)  (Rabbitbrush)	D	Shrubs - non-sprouting
al* Actual Plant names - Potential	2	Shrubs - sprouting
al* Actual Plant names - Potential	N	Trees - evergreen
al* Actual Plant names - Potential		Trees - deciduous
	Potential*	Name
	l Groups	Functional/Structural Groups
Saltdesert Breaks - 406		- FI JAHJEA
Polygon number: 170	Date: 02-69-	Observers: Managed pagedate
Functional/Structural Group Worksheet		

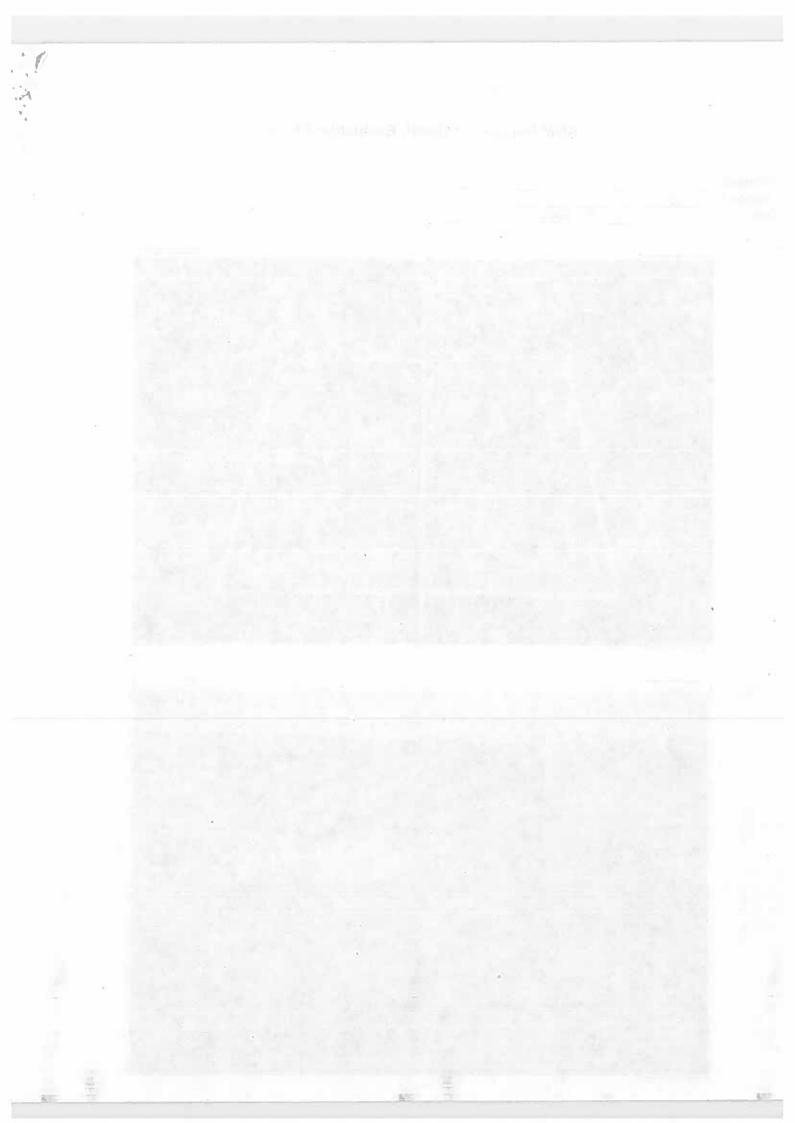


## CANM Rangeland Health Evaluation Photos

Allotment Cahone Mesq Polygon # 170 Date 8 / 8 / 200 8 / 8 / 2001







# Canyons of the Ancients National Monument

Rangeland Health Evaluation Su
valuation Summary
Worksheet - E
ummary Worksheet - Evaluation Area

Observer(s):   Application   Action	-						
Photo:   1-3-8	E G X	the Matches what is e site; minimal evid le current soil deposerosion.	Matches what is expected for tall site; some evidence of minor crosion. Flow patterns are stab and short	Nearly matches what is expected for the site; erosion is minor with some instability and deposition.	pected;	nerous; /e erosion;	2. Water Flow Patterns
Photo: 1-3-2   STANDER    ent: YELLS- STANDER    Site Photos - TANGE    Photo: 1-3-2   Site Photos - Roll: Y  Ecological Site description, soil survey, and/or ecological reference area:  e texture: SANDER   Rock - December    Ecological Site description, soil survey, and/or ecological reference area:  e texture: SANDER   SANDER    Very shallow - CON   Shallow 10-20"   Moderate 20-40"   Deep >40"  Reposite horizons in profile and depth:  CONCIONAN   Shallow 10-20"   Moderate 20-40"   Deep >40"  Recent Weather (last 2 y)  e Use: NODERATE  influences on area and significance e.g. roads, chainings, fire: road  mark used for comparison: Ecological Reference Area   (ERA number   Deep >40")  I. Extreme   Active all formation is signt at infrequent intervals, mostly in defined throughout most of the active and well defined throughout most of the area    Recent Weather (last 2 y)	1						Comments
Potential   Pote	v =	as expected for the	No recent formation of rills; of rills have blunted or muted features.	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	Rill formation is moderately active and well defined throughout most of the area	Rill formation is severe and well defined throughout most of the area	I. Rills
Pasture:   Pasture			Slight	3. Moderate	2. Moderate to Extreme	1. Extreme	Indicator:
Policy   APAPRELS STANKE   Policy	1					ntor Rating:	
Parent		and/or experience	Site/Soil		ical Reference Area		Benchmark use
Parting   Par					e.g. roads, chainings, fire	es on area and significance	Offsite influenc
Pate: としょう マラトンと氏   Polygent: としょう マランと   Pasture:   Polygent: YELLS - TANCK ET   Pasture:   Pa						LIGHT - MODERNTE	Livestock Use:
Pate: としょう STENCE (PT) (Pasture: STENCE (PT) (PT) (PT) (PT) (PT) (PT) (PT) (PT)				-		MODERATE	Wildlife Use:
Polygent: 大日本ので またいと に	1 5		Drought	Recent Weather (last 2 y	11"	Cortez 13",	Avg. annual PP
Polygent:   APSREUS   STENDER     ent:   YELLISH JANKET     nn: GPS latty 37°21,746   long   W 108' 560   APO'   Legal 54/8 21 T364  R 1964     Photo: 1-3-8   Site Photos Roll:   Wumber:   7   W     Photo: 1-3-8   Site Photos Roll:   Wumber:   7   W     Pullit/Component Name:   FARB   ROLK   OUTCROF   Number:   3     Pasture:   SOUTH   ROLK   OUTCROF   Number:   40     Site Photos - Roll:   Aspect:   226°   Topographic Position:   BENCH     Parent material:   NUCSTA   SOUTH     Parent material:   SOUTH   ROLK   SOUTH     Polygent   Parent material:   SOUTH   SOUTH     Parent material:   SOUTH   ROLK     Parent material:   SOUTH     Par	41		3		BEDR	l I	
Polygent: YELLO- TRANSES   Date: 6/4/51   Polygent: YELLO- TRANSES   Poly	1				th:	norizons in profile and dep	List diagnostic
Polygents   Poly	1					K	Depth: Very s
Polygent:   APRSPELS STANGER   Polygent:   Yellow   Topographic Position:   Polygent:   Yellow   Topographic Position:   Polygents   Pol		(8)					Surface texture
Polygent:   Polygent:   Polygent:   Polygent:   Polygent:   Yellow - Shaker   Polygent:   Yellow - Shaker   Polygent:   Yellow - Shaker   Polygent:   Yellow - Shallow 10-20"   Moderate 20-40"   Deep >40"   Pasture:   Polygent:   Pol	1			П		n Determination:	Evaluation Are
Polygent:   Polygent:   Polygent:   Polygent:   Polygent:   Yelder Jack et			3		5-20" BEURD	0-3"	I CHARLANT
Pasture:  cent: YELLOS STONER  cent: YELOS STONER  cent: YELLOS STONER	-			The state of the s	)th:	horizons in profile and dep	List diagnostic
Polygent: YELLO- TREMET  on: GPS late 7746 long Will Ste Photos - Roll: Y  photo: 1-3-8  Site Photos - Roll: Y  Number: 17 W  Recological Site Name: FARE ROLL OUTEROF  Ecological Site description, soil survey, and/or ecological reference area:  e texture: Sandy Lore  Polygent: 6/4/o., Polygent: 6/4/	4			7	× Moderate	×	
Polygon #  Per(s): ARSPELS STANKET  Polygon #  Pent: YEllon Trick et  Pint: YEllon Trick et  Photo: 1-3-8  Photo: 1-3-8  Photos Roll: 4  Photos Roll: 4  Photos Roll: 4  Polygon #  Photo: 1-3-8  Number:  7     Polygon #  Photo: 1-3-8  Photos Roll: 4  Polygon #  Photo: 1-3-8  Photos Roll: 4  Polygon #  Photo: 1-3-8  Photos Roll: 4  Polygon #  Photo: 1-3-8  Number:  7     Polygon #  Photo: 1-3-8  Photos Roll: 4  Number:  7     Number: 409  Photos Roll: 4  Polygon #  Polygon #  Photo: 1-3-8  Photo: 1-3-8  Photos Roll: 4  Number:  7     Number: 409  Polygon #  Photo: 1-3-8  Number:  7     Number: 409  Number: 409  Number: 409  Polygon #  Polygo	4 "	In .	1			SANDY L	Surface texture
Polygon #  ent: YELLS-TANKET  on: GPS late 7°21, 746' long wine '56.690'  Photo: 1-3-8  Site Photos · Roll: 4  ap Unit/Component Name: FARE ROLL OUTERS?  Ecological Site Name: SHALLS DESERT  Aspect: 226'  Aspect: 226'  Date: 6/4/s, Polygon #  Pasture:  Pasture:  Pasture:  Pasture:  Number: 17 1/8  Number: 409  Topographic Position: BENCH				erence area:	vey, and/or ecological ref	al site description, soil sur	Range/Ecologic
Polygon#  Per(s): APSPELS STANCE  ent: YELLO-1 TROWET  on: GPS lat N 37°21, 746' long W 108' 56. 690'  Photo: 1-3-8  Site Photos · Roll: 4  Ap Unit/Component Name: FARB ROCK OUTERS?  Ecological Site Name: SARLLOW DESCRT  Number: 409  Number: 409	1	DKINCH	ropograpine rosmon.		11		- 1
Date: 6/4/5: Polygon#  V' long W 108' 56.690' Legal 54/52 T 36/1R 19W  Site Photos - Roll: 4 Number: 17 以  FARE ROCK outers Number: 31	1	77776	TAUTIOGI. 10			П	Valida Proofic
Site Photos・Roll: 4  FARE Rock o いでになった	- 1	2	mher:		DCSCRT	5	Range/Ecologic
HASPELS, STONER  HASPELS, STONER  YELLOS TRUKET  PS lat N 3 7° 21, 74 1' long W 108' 5 6. 690'  PS lat N 3 7° 21, 74 1' long W 108' 5 6. 690'  PS lat N 3 7° 21, 74 1' long W 108' 5 6. 690'  Number: 17 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2			Number:		ROCK O	FARE	Soil Map Unit/
Polygon #   Polygon #   Pasture:	1		17		Site Photos - Roll: 4	3-8	Aerial Photo:
1): HASPELS, STONER Date: 6/4/s, Polygon# Pasture: Pasture:	1			21 T3	M108, 20.1M	7-21.746'	
HASPELS, STONER Date: 6/4/s1 Polygon#	1		Pasture:			Thek	_
A MARY AT TAX ON TAXABLE CONTRACTOR OF THE CONTR			6/4/			3	
					ILIOIT:	Of THEE EST DOCUMETING	I all I. Alea

							Comments
	W	Matches that expected for the site. Surface soil is stabilized by organic matter decomposition products and/or a biological crust.	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the site. Stabilizing agents reduced below expected.	Significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the site.	Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies, Stabilizing agents present only in isolated patches.	Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.	8. Soil Surface Resistance to Erosion
	A STATE OF THE PARTY OF THE PAR						Comments
_		Matches that expected for the site with a fairly uniform distributing of litter.	Slightly to moderately more than Matches that expected for the expected for the site with a fairly uniform small size classes of litter being distributing of litter.	f smaller d oressions.	Moderate to extreme; loosely concentrated near obstructions, size classes in scattere. Moderate to small size classes of concentrations around litter have been displaced.	7. Litter Movement Extreme; concentrated around obstructions. Most size classes of litter have been displaced.	7. Litter Movement
							Comments
	7	Matches what is expected for the site.	Infrequent and few.	Occasionally present.	Common	Extensive.	6. Wind-Scoured Blowouts, and/or Deposition Areas
							Comments
		Drainages are represented as natural stable channels; no signs of erosion with vegetation common.	Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.	E E 2 2 2 2	Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are active: downcutting is not apparent.	Common with indications of active erosion and downcutting; vegetation is infrequent on slopes and/or bed. Nickpoints and headcuts are numerous and active.	5. Gullies
			inss coulti.	nt low perennial a	bed tock freque	Rock out crops and	Comments
N	N	Amount and size of bare areas nearly to totally match that expected for the site.	Islightly to moderately higher than expected for the site. Bare areas are small and rarely connected.	Moderately higher than expected Slightly to moderately higher for the site. Bare areas are of moderate size and sporadically connected.	Moderately to much higher than expected for the site. Bare areas are large and occasionally connected.	Much higher than expected for the site. Bare areas are large and generally connected.	4. Bare Ground
							Comments
		Current or past evidence of pedestalled plants or rocks as expected for the site. Terracettes absent or uncommon.	Active pedestalling or terracette formation is rare; some evidence of past pedestal formation especially in water flow patterns and/or on exposed slopes.	Slight active pedestalling; most pedestals are in flow paths and interspaces and/or on exposed slopes. Occasional terracettes present.	Moderate active pedestalling; terracettes common. Some rocks and plants are pedestalled with occasional exposed roots.	Abundant active pedestalling Abundant active pedestalling; and numerous terracettes. Many terracettes common. Some rocks and plants are pedestalled; and plants are pedestalled with exposed plant roots are common. occasional exposed roots.	3. Pedesials and/or Terracettes
Hydrologic Function	Soil/Site Stability	5. None to Slight	4. Slight to Moderate	3. Moderate	2. Moderate to Extreme	1. Extreme	Indicator:

The Total Annual Control of the Cont

9. Soil Surface Loss of Degradation  Of Degradation  Comments  Community  Composition and  Distribution  Relative to  Infiltration and	9. Soil Surface Loss Soil surface horizon absent. Soil of Degradation structure near surface is similar to, or more degraded than that in subsurface horizons. No distinguishable difference in subsurface organic matter contemt.  Comments  1. Extreme  1. Extre	Soil surface horizon absent. Soil Soil loss or degradation severe structure near surface is similar to, or more degraded than that in differences in soil organic matter subsurface horizons. No distinguishable difference in subsurface organic matter content and structure of surface and subsurface layers.  Infiltration is severely decreased the to adverse changes in plant community composition and/or distribution. Adverse plant cover distribution. Detrimental plant cover changes have occurred.	Moderate soil loss or degradation in plant interspaces with some degradation beneath plant canopies. Soil structure is degraded and soil organic matter content is significantly reduced.  Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.	4. Slight to Moderate Some soil loss has occurred and/or soil structure shows signs of degradation, especially in plant interspaces.  Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.	Soil surface horizon intact. Soil surface horizon intact. Soil structure and organic matter content match that expected for the site.  Infiltration and runoff are equal to that expected for the site.  Plant cover (distribution and amount) adequate for site protection.
	fecreased in plant in and/or lant cover	Infiltration is greatly decreased due to adverse changes in plant community composition and/or distribution. Detrinental plant cover changes have occurred.	Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.		slightly to feeted by minor feeted by minor ant community ind/or distribution langes have only a in infiltration.
Comments 11. Compaction Layer (below soil surface).	Extensive; severely restricts water movement and root penetration.	Widesprend; greatly restricts water movement and root penetration.	Moderately widespread; moderately restricts water movement and root penetration.	Rarely prese weakly restri	Rarely present or is thin and weakly restrictive to water movement and root penetration.
Comments 12. Functional/ Structural Groups	Number of F/S groups greatly reduced: and/or relative dominance of F/S groups has been dramatically altered; and/or number of species within F/S groups dramatically reduced.	Number of F/S groups reduced: and/or one dominant group and/or one or more subdominant groups replaced by F/S groups not expected for the site; and/or number of species within F/S groups significantly reduced.	Number of F/S groups moderately reduced; and/or one or more subdominant F/S groups replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.	Number of reduced; and dominance been modified expected for number of groups slig	Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.
Comments	Perential Gineses	s low.			2000
13. Plant mortality/		and/or decadent plants are mewhat common.	Some dead and/or decadent plants are present.	Slight plant i decadence.	Slight plant mortality and/or decadence.
				Clichely more	or last relative to
14. Litter Amount	Largely absent or dominant (relative to site potential and weather.	Greatly reduced or increased larelative to site potential and weather.	Moderately more or less relative to site potential and weather	Slightly more	Slightly more or less relative to site potential and weather.
	Less than 20% of potential 2	20 to 40% of potential	40 to 60% of potential production	60 to 80% of production	of potential
16. Invasive Plants	Dominate the site	Common throughout the site.	Scattered throughout the site.	Present primarily on disturbed sites.	y on disturbed Rarely present on the site.
Comments				311-3.	

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Indicator:	1. Extreme	2. Moderate to Extreme	3. Moderate	4. Slight to Moderate	5. None to Slight	Soil/Site Stability	Hydrologic Function	Bioth Integri
17. Reproductive Capability of Perennial Plants (native or seeded)	Capability to produce seed or vegetative tillers is severely reduced relative to recent climatic conditions.	Capability to produce seed or vegetative fillers is greatly reduced relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is only slightly limited relative to recent climatic conditions.	Capability to produce seed or vegetative tillers is not limited relative to recent climatic conditions.			
								4
Comments								
18. Biological Crusts	Found only in protected areas, very limited suite of functional groups.	Largely absent occurring mostly in protected areas and with a in protected areas.	In protected areas and with a Evident throughout minor component in interspaces continuity is broken	Evident throughout the site but continuity is broken	Largely intact and nearly matches site capability	4	h	~
Comments								
				I	Indicator Summary:	Soil/Site Stability	Hydrologic Function	Bioti Integri
					1. Extreme			
					2. Moderate to Extreme			
					3. Moderate		8	
					4. Slight to Moderate	(6)	6	
Attribute Summar	y: Circle the umber that best fit	Attribute Summary: Circle the umber that best fits the "preponderance of evidence" for each of the three attributes relative to	for each of the three attribut	es relative to the distribution of	the distribution of 5. None to Slight	2	2	
lindicator ratings in	indicator ratings in the indicator summary section					IO	12	9000

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	l Veg	1	T	-	T	7	0	0		7	T		7	T	T	7	0	T	1	+	7	17	0.8	0.95	0.8
Bare	Soil	6	8	9	8	8				T			4		4	1	ठ	Z	4	3	_			0.95	31.1
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Ston	e 10-24 in.						8,															20	U. X	1.5	0.0
	der >24 in.																								
Bedr	ock														5							50	25		6.1

Code	Range	Mid-point	Code	Range	Mid-point
I	0 - 1.0% cover	0.5%	(6)	55.1 - 65% cover	60.0%
Ů,	1.1 - 5.0% cover	3.0%	7	65.1 - 75% cover	70.0%
0 )	5.1 - 15% cover	10.0%	100	75.1 - 85% cover	80.0%
-21	15.1 - 25% cover	20.0%	(9)	85.1 - 95% cover	90.0%
3	25.1 - 35% cover	30.0%	(A)	95.1 - 99% cover	97.0%
4	35.1 - 45% cover	40.0%	X	99.1 - 100% cover	99.5%
5.	45.1 - 55% cover	50.0%	articles made		

	Species code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	SCC	ACC	% Free	CF
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	inter   186   190	Date: GAU inter From 30 \305 186 40	Date: 6/4/61  des:  SA UT 3  inter From To inter 30 1305 1540 235 186 40	Date: 6/4/6,   Polygon #: 5
1540 235 2014 2028	Polygon #: 5/  Parco From To inter to 2029	on #: 5 / To inter 1	inter	
6/4/6 1 Polygon #: 9  173	Polygon #: 5 /  Prom To inter From 2029 2823	on #: 5 / SET  To inter From 2029 2947	inter From 2823	

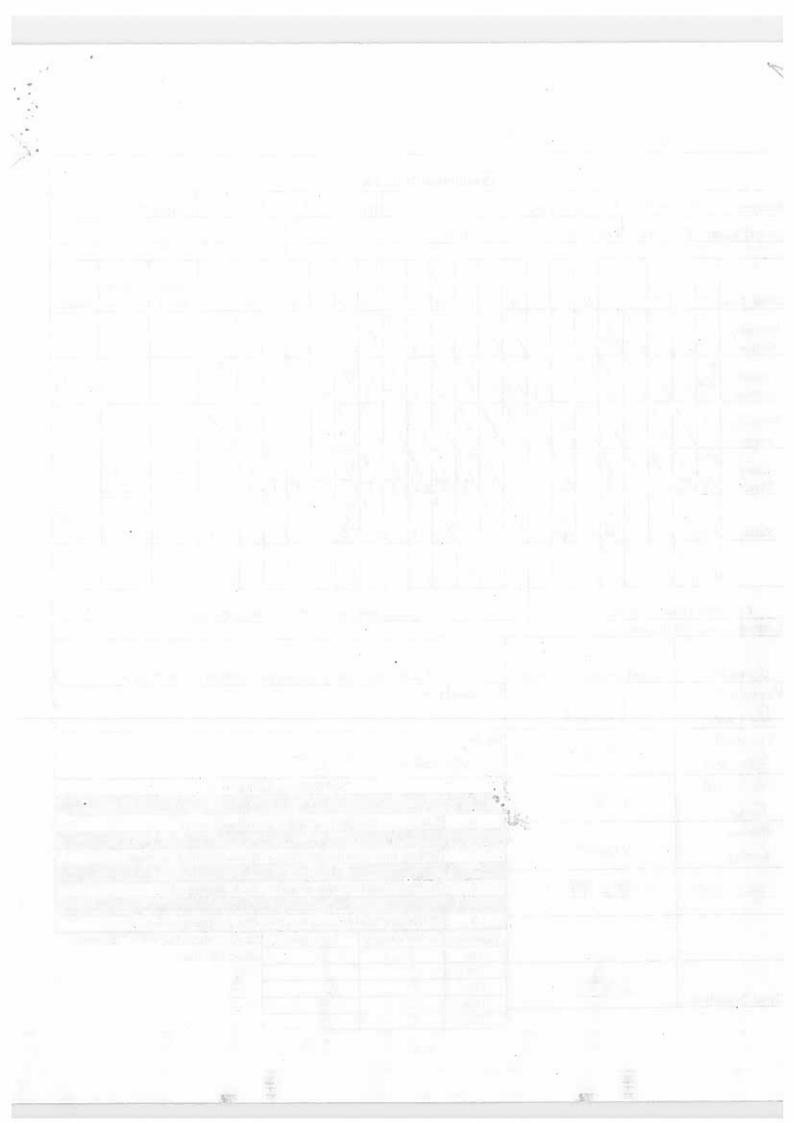
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Circle intercept values that are standing dead material

な 170 From PUST 8 2 27.5 122 inter From 765 CHGCG Total 2001 787 To front 5 4 inter 22 From 2844 2922 1 46 1551 1275 1285 10 955 1091 136 CFM02 1475 124 2060 119 7 7.8% 78 194 inter 2087 1574 From To FRANZ Species Codes: 2224 1(45 135 206 3/% inter From o inter From oT<sub>o</sub> inter From То inter

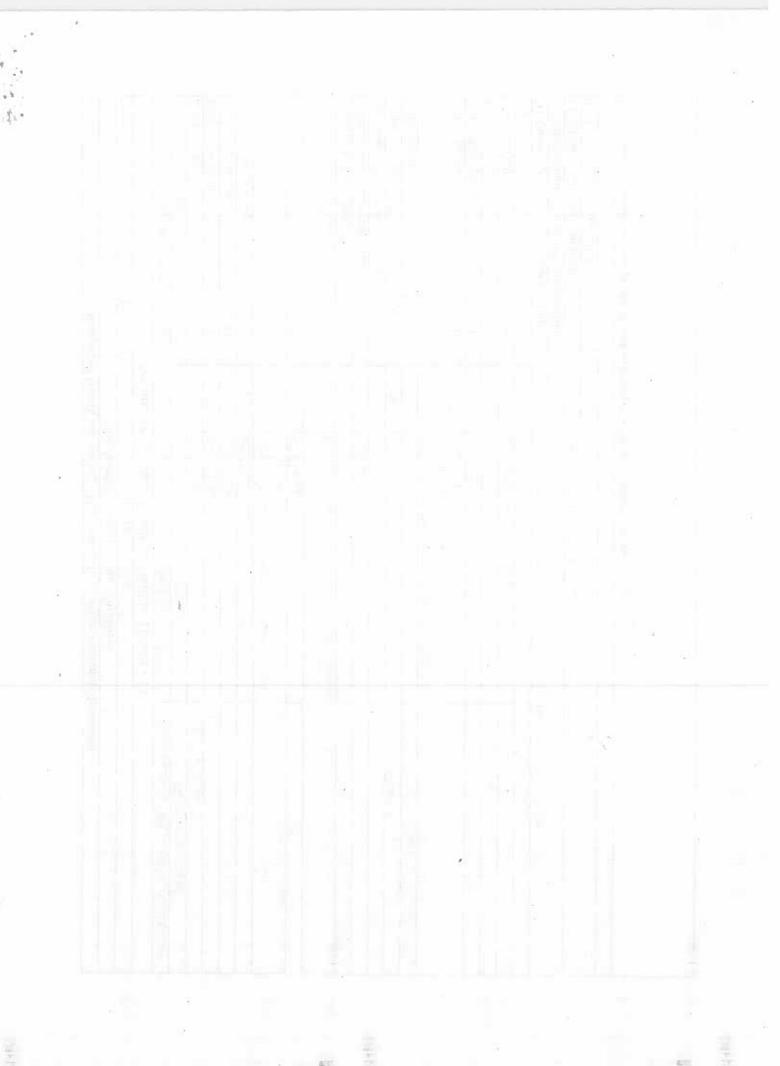
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				4					Pr	odu	ctio	n D	ata	She	et								
Observers:	Mon	es	_	Ha	50	el	S				150,886			Date	: 6		t-0	21		_	Polygon	#:51	
Transect length	: 30 r	neter	s	Fran	nes p	er tra	ınse	et: 2	20 @	20x	:50 c	m						Trai	isect		of		
Growth form 1	# 2	3 3	4.5	1 1	7.5 <b>6</b> *	9 7	105	1)	135		16.5		145	<i>ا</i> د 15	225 16#	1 '	255 18			Total	Correc- tion factor	Dry weight factor	Total dry weight
Perennial Grasses		Z	1	4	1/	/2/			Ž	/		1	/							5		.60	3
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Correcti				wt /e:	st w	<u>/                                    </u>	/	<u>/.                                    </u>	<u></u>	<u>/_</u>	<u>/</u>		Total	prod	lucti	on in	lb/a	c = 8	39.2	x total o	dry wt.		
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Grasse				13	3	8			reit		11 10	us.											
Annual Grasses	5_		C	15.	63	3			Shru		00	Sq	2	, ,	Ą	TC	0	)					
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Shrub	S		-	36	9'	7	1		2	4 5 6	1	0-25 5-75	% o	soil soil	rem	ains ains	on s	ieve ieve	after after	5 dippi	ing cycles ing cycles ping cycle		12.526
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E -												No.		4									M



	Rangelan	d Health A:	Rangeland Health Assessment - Canyons of the Ancients National Monument Functional/Structural Group Worksheet	
Observers: 1-10-DGLS/370MER	Date: 6/7	01	Polygon number: 5)	
	50	emidesei	low Desert - 113	
Functional/Structural Groups			Species List for Functional/Structural Group   Species List for Functional/Structural Group	Group
Name	Potential*	Actual	Plant names - Potential Plant names - Actual	
Trees - evergreen	N	S	Utah Juniper 3 2.5% COLCT	
Trees - evergreen	T	T	Printon Pine	
Shrubs - sprouting	M	M	(Rabbitbrush)	
Shrubs - non-sprouting	S	D	Shindscalle, Sage	
			Ephedra Vucca, Black sage, Dwarf rabbitbrush, Chiffrose, mountain mahagany	
Shrubs - non-sprouting	S	5	Prickleypear Skeak bull a season as	
Shrubs - invasive	T	<i>∧</i> √ °	Snakeweed	-
Cool Season Bunchurasses	s,	7	Ricegrass, Squirreltail, Needle & thread (Threeawn) New Maxican freether a sws s	
Warm Season Bunchgrasses				
Warm Season Rhizomatous Grasses	D	+	Galleta	
Cool Season Rhizomatous				
Annual Grasses		3	Chart (o weeks rescine	
Forbs - annual		+		Irolian Palathiath
		\	Phlox, Princesplume, Globemallow, Cymopters land land land land land land land land	
Forbs - perennial	M	-	groundsel	
Forbs - Nitrogen fixing	T		Locoweed	
Noxious weeds				
Biological crusts	S	≥	Cyanobacteria, Lichens, Moss	
Tree- decidinos			Simala loat as	
21	sition		* Potential based on ecological/range site description or ecological reference area	
S - Subdominant = 10 to 40 % composition	position			
M - Minor = 2 to 5% composition			Actual is for the area of evaluation	
T - Trace = $<2\%$ composition				
Comments: Potential annual proc	duction shoul	d be 200 - 3	Potential annual production should be 200 - 300 pounds/acre in an average year	244

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## CANM Rangeland Health Evaluation Photos

Allotment Polygon # Date YEIIOW JACKET 051 6/4/ 12001







## Canyons of the Ancients National Monument

2. Water Flow Patterns	Comments	1. 7.18	indicator:	Part 2, Indic	Benchmark use	Benchmark wa	Livestock Use:	Wildlife Use:	Avg. annual PPT:	10-55 5	Tist diagnostic	Ti-very snallow <10"	Surface texture: 5 andy	TO HOMBINION	Hyplington A	List diagnostic	Depun: Very	100	Kange/Ecolog	Orope. Jro	Close: Sal	Banga/Facility	Sail Man Thai	A serial Diagram	Location: C	Allotment:		Part 1. Are
Extensive and numerous; unstable with active erosion; usually connected.		defined throughout most of the area	1. Extreme	Indicator Rating:	Son:	4 1000	mod erate	1. aht	T: Cortez 13", Hovenweep 11"	C C	List diagnostic norizons in profile and depth:	Shallow <10" Shallow	e sandy chay	S SICH DELEI HINHHOU!	lay (no h	LIST diagnostic horizons in profile and depth:	Very shallow <10" Shallov	Clay to	Runger Ecological site description, soil survey, and/or ecological reference area:		Share Sale Name: MINA	ame:			NOK CT		A ON WITHOUT TO CHITICI	Reart 1. Area of Interest Documentation:
More numerous than expected; deposition and cut areas common; occasionally connected.		Rill formation is moderately active and well defined throughout most of the area	2. Moderate to Extreme		Ecological Reference Area	e e.g. roads, chainings, fir			011"	2 35 - 50" Sand	pth:	Shallow 10-20" Moderate 20-40"			2 20-21/36 ndv	epth:	Shallow 10-20" Moderate 20-40"		rvey, and/or ecological re	Aspect: 168°	BUTTOM	AVOLA CLAY LONIN	Site Photos - Roll: 32	long			ינמנוסון;	Rangeland Hea
Nearly matches what is expected for the site; erosion is minor with some instability and deposition.		Active rill formation is slight at infrequent intervals, mostly in exposed areas.	3. Moderate		_ (ERA number)	e old 2 track			Recent Weather (last 2 years):			0-40" Deep >40"			Oran		20-40" Deep >40"		ference area:		103-103-1			Legal NESI 3 T				lth Evaluation Summ
Matches what is expected for the Matches what is expected site; some evidence of minor site; minimal evidence of erosion. Flow patterns are stable current soil deposition or and short		No recent formation of rills; old rills have blunted or muted features.	4. Slight to Moderate		or Site/Soil Description a			2000 acco	Drought 2000	3 So creek bood			Parent material:		324-28 clay long		F	Parent material: allowing		Topographic Position:	Number: 4/3	Number: 99	Number: 56	SLNR ZOW	Pasture:	Date: 4/10/01		Rangeland Health Evaluation Summary Worksheet - Evaluation Area
Nearly matches what is expected Matches what is expected for the Matches what is expected for the for the site; erosion is minor site; some evidence of minor site; minimal evidence of past or with some instability and erosion. Flow patterns are stable current soil deposition or deposition.		Current or past formation of rills as expected for the site	5. None to Slight		Description and/or experience		Charles and the second	TACT TOOL ALEL	100c lama	2 rock			C D IN DATESTO					um from sandstone	Section (4 of the contract of	 conven botton	3	tall authorities /	STREET, STREET			Polygon # 2 (4		luation Area
3 3	1	S Submitty Function								4					4 75-100 loany 5		1 0110	rit.		Dievation: 5/30								DONE
10								-	-					1000	Ogr	-												1

Comments

Comments	8. Soil Surface II Resistance to Erosion	. Litter Movement	Comments	6. Wind-Scoured Blowouts, and/or Deposition Areas	Comments	5. Gullies	Comments	4. Bare Ground	Comments	Terraceltes	Indicator:
	Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.	7. Litter Movement Extreme: concentrated around obstructions. Most size classes of litter have been displaced.		Extensive.		Common with indications of active erosion and downcutting; vegetation is infrequent on slopes and/or bed. Nickpoints and headcuts are numerous and active.		Much higher than expected for the site. Bare areas are large and generally connected.		and numerous terracettes. Many terracettes common. Som rocks and plants are pedestalled: and plants are pedestalled: and plants are pedestalled: exposed plant roots are common. occasional exposed roots.	
	Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.	Moderate to extreme; loosely concentrated near obstructions. Moderate to small size classes of litter have been displaced.		Common.		Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are active; downcutting is not apparent		Moderately to much higher than expected for the site. Bare areas are large and occasionally connected.		Moderate active pedestalling; terracettes common. Some rocks and plants are pedestalled with coccasional exposed roots.	2. Moderate to Extreme
	Significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the site.	Moderate inovement of smaller size classes in scattered concentrations around obstructions and in depressions.		Occasionally present.		Moderate in number with indications of active crosson; vegetation is intermittent on slopes and/or bed. Occasional headcuts may be present.		Moderately higher than expected for the site. Bare areas are of moderate size and sporadically connected		Slight active pedestalling; most pedestals are in flow paths and interspaces and/or on exposed slopes. Occasional terracettes present.	e 3, Moderate
	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the slie. Stabilizing agents reduced below expected.	Slightly to moderately more than Matches that expected for the site with only site with a fairly uniform small size classes of litter being distributing of litter.		infrequent and few.		Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.	connected.			Active pedestalling or terracette formation is rare; some evidence of past pedestal formation especially in water flow patterns and/or on exposed slopes.	4. Slight to Moderate
	Matches that expected for the site. Surface soil is stabilized by organic matter decomposition products and/or a biological crust.	Matches that expected for the site with a fairly uniform distributing of litter.		Matches what is expected for the site.	1111	Drainages are represented as natural stable channels; no signs of erosion with vegetation common.		Amount and size of bare areas nearly to totally match that expected for the site.		ce pedestalled plants or rocks as expected for the site. Terracettes absent or uncommon.	5. None to Slight
	N					N		N		W	Soil/Site
		W				N		N		W Function	Hydrologic
-	M							C		Inte	Bio

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Indicator:	1. Extreme	2. Moderate to Extreme	e 3. Moderate	4. Slight to Moderate	5 Name to Slight	Soil/Site Hydrologic
9. Soil Surface Lo. of Degradation	Degradation structure near surface is similar to, or more degraded than that in subsurface horizons, No distinguishable difference in subsurface organic matter content.	Soil loss or degradation severe throughout site. Minimal differences in soil organic matter content and structure of surface and subsurface layers.	Moderate soil loss or degradation in plant interspaces with some degradation beneath plant canopies. Soil structure is degraded and soil organic matter content is significantly reduced.	Some soil and/or soil of degrada plant inters	Soil surface horizon intact. Soil structure shows signs structure and organic matter from especially in content match that expected for paces.	Stability Function
Comments						100
10. Plant Community Composition and Distribution Relative to Infiltration and Runoff.	Infiltration is severely decreased due to adverse changes in plant community composition and/or distribution. Adverse plant cover changes have occurred.	Infiltration is greatly decreased the to adverse changes in plant community composition and/or distribution. Detrimental plant cover changes have occurred.	Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.	Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.	Infiltration and runoff are equal to that expected for the site.  Plant cover (distribution and amount) adequate for site protection.	
Comments						
action low solt	Extensive; severely restricts water movement and root penetration.	Widespread; greatly restricts water movement and root penetration.	Moderately widespread; moderately restricts water movement and root penetration.	Rarely present or is thin and weakly restrictive to water movement and root penetration.	None to minimal; not restrictive to water movement and root penetration	W
Comments						
Structural Groups	Number of F/S groups greatly reduced: and/or relative dominance of F/S groups has been dramatically altered; and/or number of species within F/S groups dramatically reduced.	Number of F/S groups reduced; and/or one dominant group and/or one or more subdominant groups replaced by F/S groups not expected for the site; and/or number of species within F/S groups significantly	Number of F/S groups moderately reduced; and/or one or more subdominant F/S groups replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.	Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.	F/S groups and number of species in each group closely match that expected for the site.	
Comments	Don't have correct	F/S 65 FM		1		
13. Plant mortality/ I Decadence	or decadent plants are	ead and/or decadent plants are imewhat common.	Some dead and/or decadent plants are present.	Slight plant mortality and/or Proceedence.	Plant mortality and decadence matches that expected for the	
-	Raphtenstin de	ecodent		15	SIGC.	
14. Litter Amount L	i and	ced or increased e potential and	Moderately more or less relative (sto site potential and weather	Slightly more or less relative to A site potential and weather.	Amount is what is expected for the site potential and weather.	
Comments	and the second discussion of the second second second					and the same of th
	tential	20 to 40% of potential	40 to 60% of potential	60 to 80% of potential	wreads 202 of moneying	
	production DISTERNANT P	production		- Policium -	exceeds 60% of potential	
_	1920an or smithfull behavior				riodiciioii	SELECTION OF STREET
e Plants	Dominate the site is reason of	Common throughout the site.	Scattered throughout the site.	nt primarily on disturbed	Rarely present on the site.	
Comments			5	stres.		

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indicator ratings in			* 1			Comments	18. Biological Crusts	Соттель	Capability of Perennial Plants (native or seeded)	Indicator:
Indicator ratings in the indicator summary section			,				Found only in protected areas, very limited suite of functional groups.		Capability to produce seed or vegetative tillers is severely reduced relative to recent climatic conditions.	1. Extreme
Attribute Simmary: Circle the umber that best fits the "prependerance of evidence" for each of the three attributes relative		£0					Found only in protected areas, . Largely absent occurring mostly in protected areas and with a very limited suite of functional in protected areas.  minor component in interspace groups.		Capability to produce seed or vegetative fillers is greatly reduced relative to recent climatic conditions.	2. Moderate to Extreme
for each of the three attribute							In protected areas and with a Evident throughout minor component in interspaces continuity is broken		Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	3. Moderate
							Evident throughout the site but continuity is broken		Capability to produce seed or vegetative tillers is only slightly limited relative to recent climatic conditions.	4. Slight to Moderate
to the distribution of 5. None to Slight	4. Slight to Moderate	3. Moderate	2. Moderate to Extreme	1. Extreme	Indicator Summary:		Largely intact and nearly matches site capability		Capability to produce seed or vegetative tilters is not limited relative to recent climatic conditions.	5. None to Slight
10	+	4	۵	- 100	Soll/Site Stability	The second	-	CONTRACTOR OF STREET		Soil/Site
2	17	(7)	۵	1	Hydrologic Function		1	William marantares		Hydrologic
	-	4	0	2	Bit	-	_	-	W	Inte

ASSERBING SECTION Washington observe THE RESIDENCE TO SEE ME ON STREET BATTERN STREET S. E. Batherine

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Code	Range	Mid-point	Code	Range	Mid-point
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	1.1 - 5.0% cover	3.0%	The second second	65.1 - 75% cover	70.0%
1	5.1 - 15% cover	10.0%		75.1 - 85% cover	80.0%
· 2	15.1 - 25% cover	20.0%		85.1 - 95% сочег	90.0%
	25.1 - 35% cover	30.0%		95.1 - 99% cover	97.0%
	35.1 - 45% cover	40.0%		99.1 - 100% cover	99.5%
33	45.1 - 55% cover	50.0%		the state of the s	77.570

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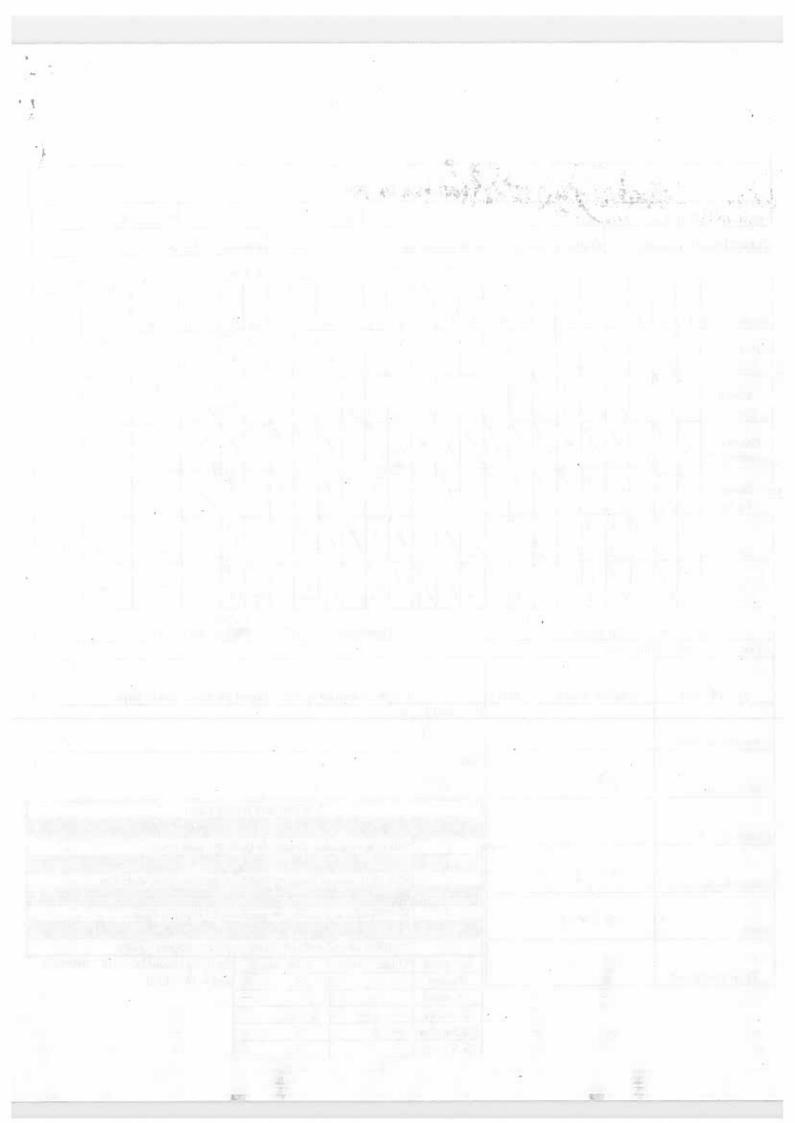
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185	,	Production Date	a Sheet			
Observers: LA-PE	SSTONER		Date: 9/10/01	,	Polygon #: 2	7.11
Transect length: 30	' I	r. 20 @ 20x50.cm		Transect	of_	- 4
			5 04 0 00 5 04 0 00 5		. 01	
0.0 1.	3 3.0 4.3 6.0 7.3 9.0 10.3	12.0 13.5 15.0 16.5 18.0 19.	5 21.0 22.5 24.0 25.5	27.0 28.5	Correc- D	ry   Total
Growth form 1* 2	3 4 5 6* 7 8	9 10 11* 12 13 14		19 <b>20*</b> Total	tion we	ight dry
Perennial Grasses				1/1/2	-5 -1	35 .85
Grasses  Annual Grasses  Perennial	1/1/1/1/4/4	47/1/A/A	WIAV	/T/ 15	2.5/3	75 11.4
Perennial Porbs		7/7/7/2/1	17/1/1	7//		
Annual Forbs	12/1/1/	77-17-17	TAAA	AD		
Shrub /	1/21/85/10/	134///	1/1/8	135 5	1-6 -6	25 140.9
Annual Forbs	1/2/1/1/1/1/	1/1/1/2/1	VIVTVT	T /T /15.5	-4	0 6.Z
Correction far * Location for soil st	ctor = clip wt /est wt.	Tota	al production in lb/a	4.46 c = x total	dry wt.	
Growth form	Pounds per acre dry weigh		dominant species	lipped for these	growth forms	
Perennial Grasses	3.8	Perennial Forbs:				
Annual Grasses	50.8	Shrubs:	TR4 LYPA			
Perennial Forbs		Rating O Soil is			iability classe	
Annual Forbs	27.6	2 50% of	structural integrity structural integrity	lost within 5 second	onds of insert Is after insertic	on
Shrub	628.4	51 = 4 24/69	of soil remains on colors of soil remains or	sieve after 5 dir	ping cycles ping cycles "	
Total Production	710.6	Location Under	% of soil remains of canopy Inter-s		should be < 1	/4 " diameter
		7.5 meter	3 3			
44-		3.	The Assessment of the Control of the			

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Intercept % Cover Observers: HASPELS STONER Line Length: 30 m Total Circle intercept values that are standing dead material SA:11.2 From 328 511 224 245 2668 2-739 2518 1221 720 799 622 654 173 2978 2997 7497 2601 귱 79 22 166 183 2 001 23% 189 inter 38 0 8hb 225 From 8401 290 l<sub>o</sub> 1219 (283) 236 inter 3 ~ (S) Transect From 746 17/4 SAVEY 172 5 860 ᅙ 으 (69 inter 114 Line Intercept From 299 大 Species Codes: サー・ファウマー KHY18 X rom Jo back 32 inter 8 Date: From 2998 1561 2 3000 10 61 6 inter N 69 N 10/ % From 2194 2217 22 Polygon #: 244 2470 7 410 23 inter 5 2% From 285 70 inter 80 W 080

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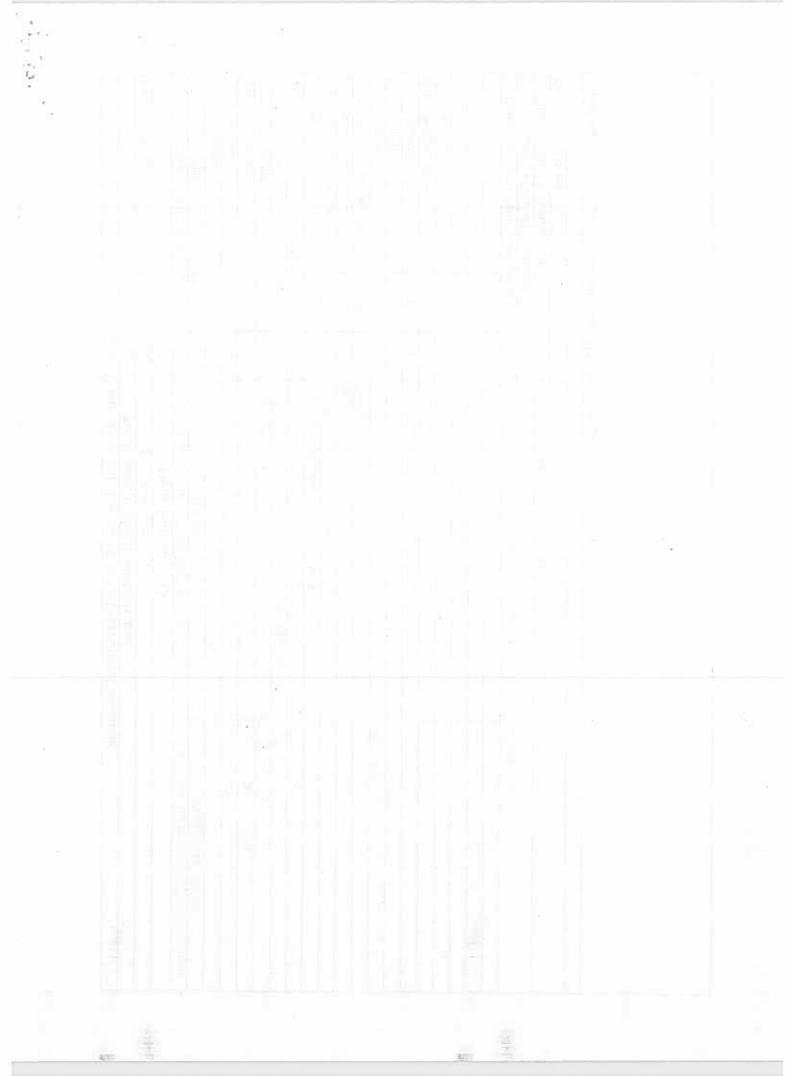
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	Ran	geland H	Rangeland Health Assessment - Canyons of the Ancients National Monument	ment
			10	
Coservers. HK Sign Co. June Co. Date	Date. 4	10/11	Allrali Bottom - 413	
J			Carrier I be for Emperoral/Compensed Croum	Species List for Functional/Structural Group
nal/Structurat G	comps		Species Fist for Lancifolian an actual Group	Diant names Artist
Name	Potential*	Actual	Plant names - Potential	Plant names - Actual
Trees - deciduous				
Trees - evergreen		4		SANT
Shrubs - sprouting		3		CHNA & CHVID
Shrubs - non-sprouting	S	D	Greasewood	SETRY)
Shrubs - non-sprouting	M	4	Fourwing, Shadscale, Nuttal Saltbush, Sage, Spiny hopsage	LYPA
Shrubs - invasive	,			GWA2
Cool Season Bunchgrasses	S		Sandburg bluegrass, Squirreltail, Wildrye	
Warm Season Bunchgrasses	D	+	Alkali sacaton, Sand dropseed	
Cool Season Rhizomitous grasses	2		Sedges, Rushs	
Warm Season Rhizomitous grasses	3	3	Galleta, saltgrass	
Annual Grasses		b		AZ C
Forbs - annual		3		- 0
Forbs - perennial	21	3	Globemallow, Evening primrose	CUFE 3
Forbs - Nitrogen fixing				
Noxious weeds				
Biological crusts	S		Cyanobacteria, Lichens, Moss	
D - Dominant = 40 to 100% composition	ition		* Potential based on ecological/range site description or ecological reference area	ical reference area
S - Subdominant = 10 to 40% composition	osition			
M - Minor = 2 to 5% composition			Actual is for the area of evaluation	
T - Trace = <2% composition				
Comments: Potential annual prod	uction sho	uld be 40	Potential annual production should be 400 pounds/acre in an average year	
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DONE

## Canyons of the Ancients National Monument

Rangeland Health Evaluation Summary Worksheet - Evaluation Area

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2. Water Flow Patterns	Comments		I. Rills	art 2. indic		enchmark use	Livestock Use:	Wildlife Use:	Avg. annual PPT:	DVAUC GHO	ist diagnostic	Depun: Very	L LO	valuation Ar	03 3	ist diagnostic	Depth: Very	Surface texture:	ange/Ecolog		Slope: Sy	ange/Ecolog	Soil Man Unit	Location: G		Observer(s):	Part 1. Are	
Extensive and numerous; unstable with active erosion; usually connected.		defined throughout most of the active and well defined area throughout most of the area	Rill formation is severe and well	rart 2, Indicator Kaung:		Benchmark used for comparison: Ecological Defendance to	Light to Made	10 MT	PT: Cortez 13", Hovenweep 11"	8	List diagnostic horizons in profile and depth:	very shallow <10" Shallow	Extreme	Evaluation Area Determination:	strongly ettancent	List diagnostic horizons in profile and depth:	Very shallow <10"   X Shallow	E VENY Stone	Range/Ecological site description, soil survey, and/or ecological reference area;		Size Assure.	Range/Ecological Site Name:	Soil Man Unit/Component Name:	S lat 07 22.658	Day Jack	Stover Haspe	Part 1. Area of Interest Documentation:	
More numerous than expected; deposition and cut areas common; occasionally connected.		active and well defined throughout most of the area	2. Woderate to Extreme		Secondaria vererence View	e e.g. roads, chainings, fir	CRE		11"	2 3-5" CELCIC	pth:	Shallow 10-20" X Moderate 20-40"	XXX	ر	2 Rad Fran 5-	1	Shallow 10-20" X Moderate 20-40"	ex clay ban	rvey, and/or ecological re	Column (C)	ASSICT ASSOCIA	CONT. LAS	Site Photos - Roll:	long 108, 54, 467	3	5/5		rangeration.
Nearly matches what is expected Matches for the site; erosion is minor site; som with some instability and erosion, and shor		Active ful formation is slight at infrequent intervals, mostly in exposed areas.	3. Moderate		(EKA number)				Recent Weather (last 2 years):	depos, TS		0-40" Deep >40"			80% 03:		10-40" Deep >40"	4	ference area;		150		O	Legal NWS T				Treatti Dyaluation Summary
		No recent formation of rills; old rills have blunted or muted features.			or Site/Soil Description and/or experience				Drought 2000	3 potented out			Parent material: Morr	-	3 byosum Cr			Parent material:		Topographic Position:	Number: 10	0	Number: 24 20	12	Pasture:	Date: 9-6-01		Dary Worksheet - Hyalnation Area
what is expected for the Matches what is expected for the e evidence of minor site; minimal evidence of past or flow patterns are stable current soil deposition or erosion.		Current or past formation of rills as expected for the site	5. None to Slight		nd/or experience X		tel to Manual and the later la		Normal 2001 Wet	1,51 @		The second secon	ison shole		rystyls 9-18"			200 6490	Complete of the complete of th	olling hills in Conjun	6	A Tarted Batthe	Z It alianissed by	Calabillo		Polygon # 2/5	Mark 191 191 191	Ination Area
W		5	Soll/Site Stability							4				- 1.	4 untito			The second	A STATE OF S	Elevation:	Merchanist Comp						And the latest of the latest o	
W		S	Hydrologic Function												2					5240				100				
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Comments

Comments	8. Soll Surface Resistance to Erosion	Comments	7. Litter Movemen	Comments	6. Wind-Scoured Blowouts, and/or Deposition Areas	Comments	5. Gullles	Comments	4. Bare Ground	Comments	Terracettes	3. Pedestals and/or
	Extremely reduced throughout the site. Biological stabilization pagents including organic matter and biological crusts virtually absent.		7. Litter Movement Extreme; concentrated around obstructions. Most size classes of litter have been displaced.		Extensive,		Common with indications of active erosion and downcutting, vegetation is infrequent on slopes and/or bed. Nickpoints and hendeuts are numerous and active.		Much higher than expected for the site. Bare areas are large and generally connected.			/or Abundant active acdes falling
	Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.		Moderate to extreme; loosely concentrated near obstructions. Moderate to small size classes of litter have been displaced.		Common.		Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are active: downcutting is not apparent		Moderately to much higher than d expected for the site. Bare areas are large and occasionally connected.		and numerous terraceites, Many terraceites common. Some rocks rocks and plants are pedestalled; and plants are pedestalled with exposed plant roots are common, occasional exposed roots.	2. Nioderate to Extreme
	Significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the site.		Moderate inovenient of smaller size classes in scattered concentrations around obstructions and in depressions.		Occasionally present.		Moderate in number with indications of active erosion; vegetation is intermittent on slopes and/or bed. Occasional headcuts may be present.		Moderately higher than expected Slightly to for the site. Bare areas are of than expect moderate size and sporadically areas are sr connected.		Slight active pedestalling; most pedestals are in flow paths and interspaces and/or on exposed slopes. Occasional terracettes present.	_
	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the site. Stabilizing agents reduced below expected.		Slightly to moderately more than Matches that expected for the expected for the site with a fairly uniform small size classes of litter being distributing of litter.		Infrequent and few.		Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erasion.		ed Slightly to moderately higher than expected for the site. Bare areas are small and rarely connected.		Active pedestalling or terracette formation is rare; some evidence of past pedestal formation especially in water flow patterns and/or on exposed stopes.	4. Slight to Moderate
	Matches that expected for the site. Surface soil is stabilized by organic matter decomposition products and/or a biological crust.		Matches that expected for the site with a fairly uniform distributing of litter.		Matches what is expected for the site.		Drainages are represented as natural stable channels; no signs of erosion with vegetation common.		Amount and size of bare areas nearly to totally match that expected for the site.		tte Current or pastrevidefice of the pedestalled plants or rocks as expected for the site. Terracettes absent or uncommon.	5. None to Slight
	8				N		7	1	N		2 2 18	Soil/Site
	W		e)	T. Carlotte			4	1	W		2	
	W									100,000		

re Plants Dominate the site 18 (6000)	the same of the sa	Production production production production	Comments	14. Litter Amount Largely absent or dominant Greatly red relative to site potential and relative to:  weather.		nortality/ Dead and/or decadent plants are common.	Comments	Structural Groups reduced: and/or relative dominance of F/S groups reduced: and/or one or more and/or number of species within F/S groups not expected for the F/S groups significantly reduced.	11. Compaction Extensive; severely restricts Widespread water movement and root water move surface). Penetration.	Comments	Infiltration is severely decreased ty due to adverse changes in plant community composition and/or distribution. Adverse plant cover changes have occurred.	Comments	Inflore Loss Soil surface horizon absent. Soil structure near surface is similar to, or more degraded than that in subsurface horizons. No distinguishable difference in subsurface organic matter content.	Indicator: 1. Extreme 2. Mo
Common throughout the six	12			Greatly reduced or increased in relative to site potential and weather.		nt plants are			Widespread; gready restricts water movement and root penetration.		infiltration is greatly decreased the to adverse changes in plant community composition and/or distribution. Detrimental plant cover changes have occurred.		Soul loss or degradation severe throughout site. Minimal differences in soil organic matter content and structure of surface and subsurface layers.	Moderate to Extreme
		40 to 60% of potential		Moderately more or less relative to site potential and weather		Some dead and/or decadent plants are present.		Number of F/S groups moderately reduced; and/or one or more subdominant F/S groups replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.	Moderately widespread; moderately restricts water movement and root penetration.		Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.		Moderat degradat with son plant car degradec content i	3. Moderate
	production	of potential		Slightly more or less relative to site potential and weather.		Stight plant mortality and/or decadence.		Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.	Rarely present or is thin and weakly restrictive to water movement and root penetration.		Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.		Some so and/or so of degrae plant inte	4. Slight to Moderate
	production	Exceeds 80% of potential		Amount is what is expected for the site potential and weather.		Plant mortality and decadence matches that expected for the site.		F/S groups and number of species in each group closely match that expected for the site,-	None to minimal; not restrictive to water movement and root penetration		Infiltration and runoff are equal to that expected for the site. Plant cover (distribution and amount) adequate for site protection.		Soil s struct conte the si	5. None to Slight
	の世界の大学の大学の大学の		RESERVED OF THE PERSON		and the second of the second o				5	1				SoilVSite Hy
皇皇皇	The second second	<i>J</i>		2	To a Company and the	3		W	5	and the second	W		2) Int	Hydrologic B

	Comments	18. Biological Found only in protected areas, Crusts very limited suite of functional groups.	Comments	Capability of vegetative tillers is severely Perennial Plants reduced relative to recent (native or seeded) climatic conditions.	1 10 10	
				roduce seed or is is severely e to recent ions.	I. Extreme	
		Largely absent, occurring mostly In protected areas and with a in protected areas.		Capability to produce seed or vegetainve tillers is greatly reduced schattive to recent climates conditions.	2. Moderate to Extreme	
		In protected areas and with a Evident throughout minar component in interspaces continuity is broken		Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	3. Moderate	
		Evident throughout the site but continuity is broken		Capability to produce seed or vegetative tillers is only slightly limited relative to recent climatic conditions.	4. Slight to Moderate	
Indicator Summary:  1. Extreme 2. Moderate to Extreme 3. Moderate 4. Slight to Moderate		Largely intact and nearly matches site capability		Capability to produce seed or vegetative tillers is not limited relative to recent climatic conditions.	5. None to Slight	
Soli/Site Stability  2	Strate Str	_	CONTRACTOR OF STREET		Soil/Site	
Hydrologic Function		3	delicate and material creeks		Hydrologic	
		-		W	Inte	

Obs	servers: HASPELS		TON	)Ce					47		que				D-1-		1.0.1	- I				In a			
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	ter for frame location				$\overline{}$			1	_	120	125	150	16.5	40.0	40.5				_	_	_	_of_		_	
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\* estimated out of the field

Code		Mid-point	Code	Range	Mid-point
100	0 - 1.0% cover	0.5%	10.5	55.1 - 65% cover	60.0%
( ); - i	1.1 - 5.0% cover	3.0%		65.1 - 75% cover	70.0%
	5.1 - 15% cover	10.0%		75.1 - 85% cover	80.0%
P. 2. 3	15.1 - 25% cover	20.0%		85.1 - 95% cover	90.0%
	25.1 - 35% cover	30.0%		95.1 - 99% сочег	97.0%
46.34	35.1 - 45% cover	40.0%		99.1 - 100% cover	99.5%
, 3	45.1 - 55% cover	50.0%		2 2 3 4 2 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4	371010

Species code	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	81	19	20	scc	ACC	% Freq	CFI
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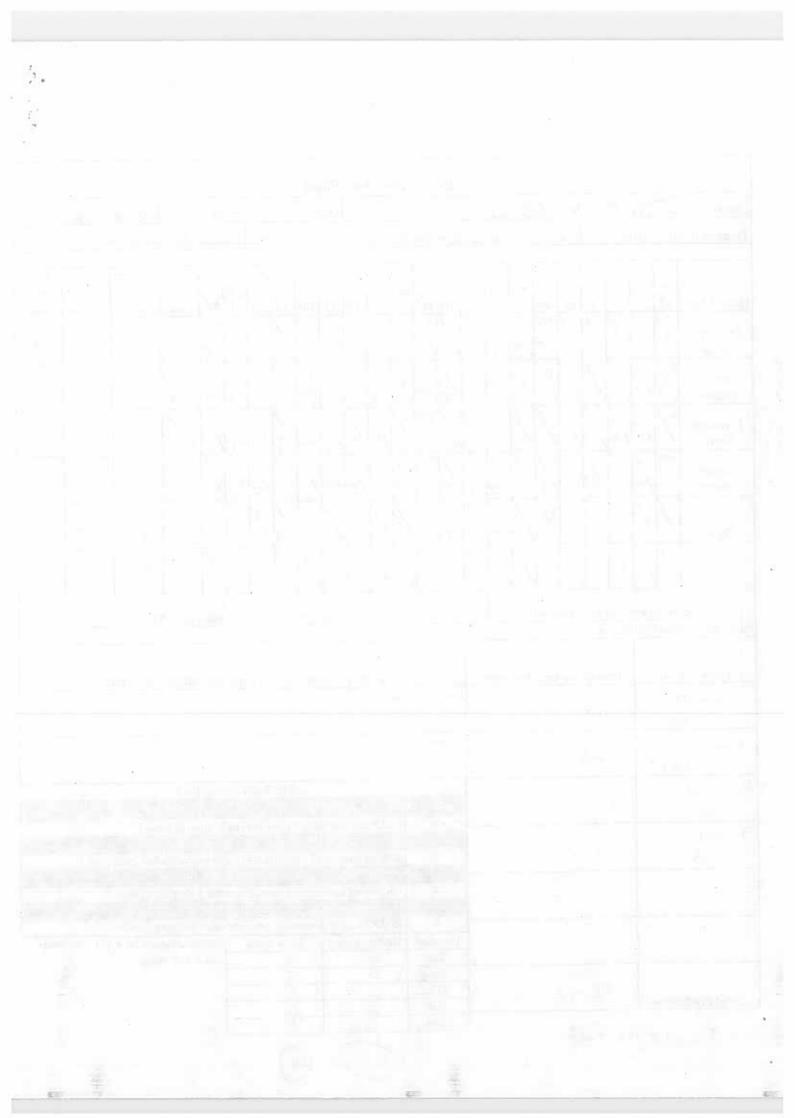
j.

PIED Total Estimated total cover for PJ type: Circle intercept values that are standing dead material % Cover Intercept Observers: HASPELS Line Length: 30 m 565 2427 2391 2025 2051 1090 From 778 2094 2100 874 1876 (2 458 1264 1276 24514 200 3699 2440 2 403 1097 572 60 780 221 To % 12 24 45 48 <u>\_</u> 0 [2] 7 1 (-) r Ν inter Ξ STONER From 20 0 2049 693 Jo So ٩ inter % Transect From ŏ 으 inter Line Intercept From Species Codes: To inter From Date: 9/10/01 70 inter Polygon #: From T<sub>0</sub> Nis inter From oTo inter

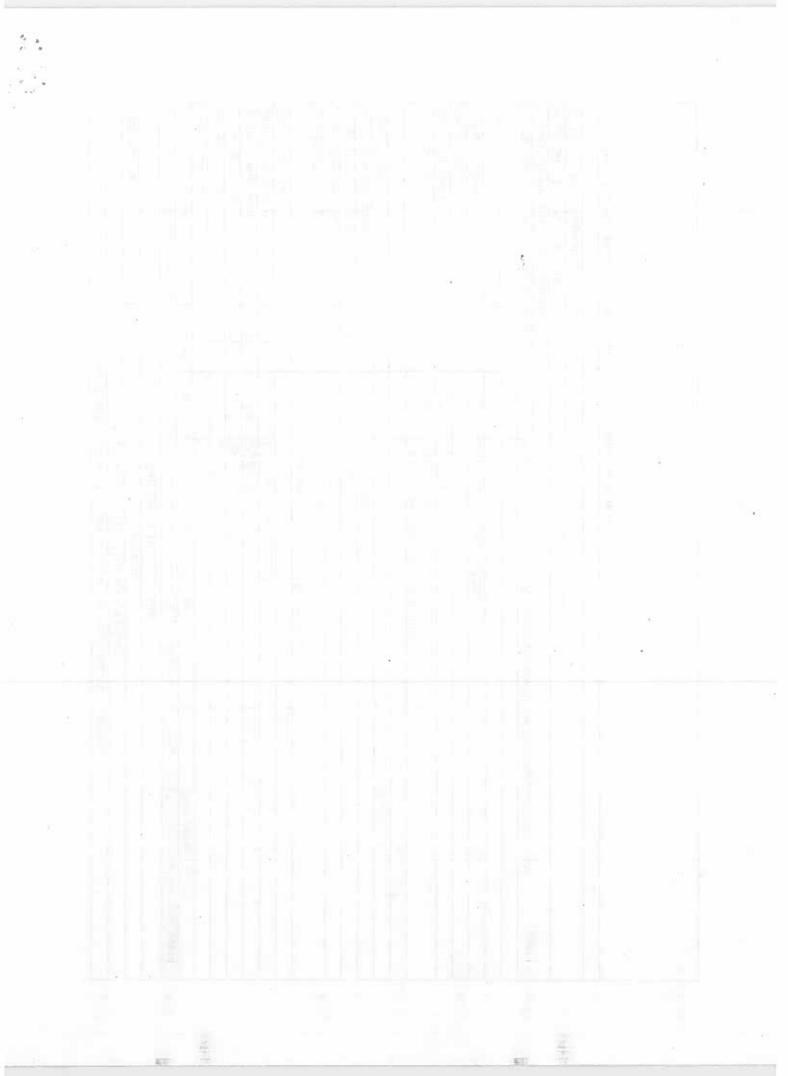
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From 01 inter From To inter From 07 inter From Species Codes: To inter From οT inter From 7 inter From oT<sub>o</sub> inter

				Produ	iction Da	ta She	et						
Observers: 5	toner 1	1950e	5			Date		10-	- ウ I		Polygon	# 3	16
Transect length:	}	Frames per		20 @ 20x	:50 cm	1240		100	ransec		of _/	m. Of	2
				20 C 20	SO CIN	7-1-12		1	ansec		01_1		
Growth form 1*	3 45 2 3 4	6 75 5 5 <b>6*</b> 7	8 9	135/5			⊋∑;⊃4 <b>16</b> * 17		) 2.43 9 20*	Total	Correc- tion factor	Dry weight factor	Tota dry weig
Perennial Grasses		17/	3/1/		1					11.5	1	-40	4.6
Annual Grasses		AZI	1	17	/T/T/		7/1	//	1/7	/12	1	.95	11.4
Perennial Forbs	1/1/3/		1	45	/ <sub>1</sub> / <sub>1</sub> /			//-		10.5	1-5/2 .75	-40	3.7
Annual Forbs	VT/T/T	4//	V-1/1	4/1	/1/1/					13	ţ	.70	9.1
Shrub	4/4/			/1/				/4/		12	1	-50	6
		VVV	VV										
Correctio  * Location for so	n factor = clip	wt /est wt.	$\perp$		To	al produ	ction in	lb/ac =	4.46 89-9		lry wt.		
Growth form Perennial Grasse	n Pound	s per acre dry	weight	Perennial	List th	e domin	ant spec	ies clip	ped fo	r these	growth for	rms:	
Annual	CD	8		Shrubs:			2 10 1						
Perennial Forbs	14.	3		Rating 0				ler iks	i nm	ili'(e) YAI	bility clas		
Annual Forbs	40.	6		2 1	50% of	structura	il integri	ty fest ty lost	iilliu 5-30 s	cconds	os ofins after inser	dien in tion	(1)(5)
				4	10-25%	of soil r	emains ( emains)	on siev Misiev	e after	5 dippi 5 dippi	g cycles ng cycles ကြည်လျှင်လ		
				Location	n Under d	of soil		on sie space			ing cycle: ould be <		meter
Total Producti	on 12	6.2		1m 6m 11m	95		6		and	< 1/8"	thick		ş
estimated out	& the Fie	eld		20m	4		63		_				



	Rangelan	d Health A	tional	Monument	5
		F	Functional/Structural Group Worksheet		X
Observers: I'A SPE STEMER	Date: 9/10	101	Polygon number: 2/5		
			Saltdesert Breaks - 406		
Functional/Structural Groups	Ciroups		Species List for Functional/Structural Group	Species List for Functional/Structural Group	4
Name	Potential*	Actual	Plant names + Potential	Plant names - Actual	
Trees - deciduous					
Trees - evergreen	M	4	Utah Juniper		
Shrubs - sprouting	M		Rabbitbrush		
Shrubs - non-sprouting	D	M	Shadscale?	ATGA SAVEY	
Shrubs - non-sprouting	M		Fourwing, Winterfat, Sage		
Shrubs - invasive		CΛ		Gu 5172	
			Salina wildrye, Ricegrass, Squirreltail,		
Cool Season Bunchgrasses	M-S		Necdle&thread, Sandburg, Threeawn		
Warm Season Bunchgrasses	S		Alkali sacaton		
Warm Season Rhizomatous Grasses	D	20	Calleta>		
Cool Season Rhizomatous	M		Westernwheat		
Annual Grasses		C)		Chart Hooked Barley	
Forbs - annual		3		OLIPZ CECIGIAMA COLOP SHANZ HEAVS	
	-	>	Onion, Phlox, Primrose, Princesplume,	CHEEZ Discoulus 10 Fil	
Contra Nilliano Cuina	:	1	Contraction of Copy of the Cop		
Noxious weeds		-	TOTAL TRACE		
District county	2		Control of the Contro		2.1
Biological crusts	S	7	Cyanobacteria, Lichens, Moss		3
D - Dominant = 40 to 100% composition	sition		* Potential based on ecological/range site description or ecological reference area	ition or ecological reference area	
S - Subdominant = $10 \text{ to } 40\%$ composition	osition				
M - Minor = 2 to 5% composition			Actual is for the area of evaluation		
T - Trace = <2% composition					
Comments: Potential annual prod	uction shoul	d be 200 pa	Potential annual production should be 200 pounds/acre in an average year		
				*5	
				3	
				100	



## **CANM Rangeland Health Evaluation Photos**

Allotment \_ Polygon # \_ Date \_ 7ellow Sacket 215 9/6/2001



Transect photo

## Canyons of the Ancients National Monument

Rangeland Health Evaluation Summary Worksheet - Evaluation Area

The state of the s						Comments
7	Matches what is expected for the site; minimal evidence of past or current soil deposition or erosion.	Nearly matches what is expected Matches what is expected for the Matches what is expected for the for the site; some evidence of minor site; minimal evidence of past or with some instability and erosion. Flow patterns are stable current soil deposition or deposition.	Nearly matches what is expected for the site; erosion is minor with some instability and deposition.	More numerous than expected; deposition and cut areas common; occasionally connected.	Extensive and numerous; unstable with active erosion; usually connected.	2. Water Flow Patterns
1000						Comments
S	Current or past formation of rills as expected for the site	No recent formation of rills; old rills have blunted or muted features.	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	Rill formation is moderately active and well defined throughout most of the area	defined throughout most of the area	2
Soll/Site Hydrologic	5. None to Slight	4. Slight to Moderate	3. Moderate	2. Moderate to Extreme	1. Extreme	Indicator:
					Indicator Rating:	Part 2. Indic
	Description and/or experience	or Site/Soil Description a	(ERA number)	Ecological Reference Area	son:	Benchmark us
			JONOS :	e e.g. roads, chainings, fi	Chisite inliuences on area and significance e.g. roads, chainings, fire:	Oitsite intinen
		2 - 1 m 1 m 2			moderate	Livestock Use:
	THE WASTER	Saliston And			1954	Wildlife Use:
,	ormal	8	Recent Weather (last 2	11.	PT: Cortez 13", Hovenweep	Avg. annual PPT:
4 duy to 60"	z 28" on	3 28" GUPSUM CALDE		2 chay (ims 13 28"	0	- Same Calc
				pth:	12	List diagnostic
			20-40" Deep >40"	Shallow 10-20" Moderate 20-40"	Very shallow <10" Shallow	Depth: Very
	Shorto	Parent material: Morris			e: Clay 100.00	Surface texture:
	000	1000000			Evaluation Area Determination:	Evaluation Ar
A	21-621	3 (mor (ac)		2 clay lims 5-31"	effervescont from start	1 String by effer
				pth:	List diagnostic horizons in profile and depth:	List diagnosti
			20-40" Deep >40"	Shallow 10-20" Moderate 20-40"	Very shallow <10" Shallov	Depth: Very
C. C	offison short	Parent material: Mon		Company of the Park	e: CLAY LOAM	100
	antehon vitibili		eference area:	rvey, and/or ecological r	Range/Ecological site description, soil survey, and/or ecological reference area:	Range/Ecolog
Enevarion: 51.00	CONVON	Pologenisme v comon				
	9	Topographic Position:		Aspect: 205		Slope: 5%
		1		alt descet	Kange/Ecological Site Name: Clayer	Kange/Ecolog
	setrant battate 85	Number:	4 SPINCS	TACOL) Zwilker CIT	T James	Soll Map Uni
	Dagitality civil	Number: 19 20		Site Photos - Roll: 3	1-2-10	Aerial Photo:
-	ic sepalated to	SLOW ZOW	LegalSES   3T3	187 65,801 Buc	GPS lat 37° 22. 754' long	Location: G
		Pasture:			YELL ON THICKET	1"
	Polygon # 7/	Date: 9//3/0/		The second secon	HISRIS STONER	Observer(s):
		and the state of t		tation:	a of Interest Documen	TE .T 9 TE T
		and the second s		tation:	' les	server(s):

Comments	8. Soil Surface Resistance to Erosion	Comments	7. Litter Movement	Comments	6. Wind-Scoured Blowouts, and/or Deposition Areas	Comments	5. Gullies	Comments	Si the Country	Comments	retrucentes	3. Pedestals and/or	THUTCHIOT:
	Extremely reduced throughout the site. Biological stabilization agents including organic matter and biological crusts virtually absent.		7. Litter Movement Extreme; concentrated around obstructions. Most size classes of litter have been displaced.		Extensive.		Common with indications of active erosion and downcurring; vegetation is infrequent on slopes and/or bed. Nickpoints and headcuts are numerous and active.		Muca nigher than expected for the site. Bare areas are large and generally connected.		and numerous terracettes. Many terracettes common. Som rocks and plants are pedestalled: and plants are pedestalled exposed plant roots are common, occasional exposed roots.	Abundant active pedestalling	1. Extreme
	Significantly reduced in most plant canopy interspaces and moderately reduced beneath plant canopies. Stabilizing agents present only in isolated patches.		Moderate to extreme; loosely Moderate movement o concentrated near obstructions. size classes in scattere Moderate to small size classes of concentrations around litter have been displaced.  Obstructions and in department		Common.		Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are active downcutting is not apparent		which agree than expected for Moderately to much higher than the site. Bare areas are large and expected for the site, Bare areas generally connected.	1	y terracettes common. Some rocks t: and plants are pedestalled with n, occasional exposed roots.	Moderate active pedestalling:	2. Noderate to Extreme
	Significantly reduced in at least half of the plant canopy interspaces, or moderately reduced throughout the site.		Moderate movement of smaller size classes in scattered concentrations around obstructions and in depressions.		Occasionally present.		Moderate in number with indications of active erosion; vegetation is intermittent on slopes and/or bed. Occasional headcuts may be present.					Slight ac	e 3. Moderate
	Some reduction in soil surface stability in plant interspaces or slight reduction throughout the site. Stabilizing agents reduced below expected.		Slightly to moderately more than expected for the site with only small size classes of litter being displaced.		Infrequent and few.		Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.		Moderately higher than expected Slightly to moderately higher for the site. Bare areas are of than expected for the site. Bare moderate size and sporadically areas are small and rarely connected.				4. Slight to Moderate
	Matches that expected for the site. Surface soil is stabilized by organic matter decomposition products and/or a biological crust.		moderately more than Matches that expected for the r the site with only site with a fairly uniform lasses of litter being distributing of litter.		Matches what is expected for the site.		Drainages are represented as natural stable channels; no signs of erosion with vegetation common.		Amount and size of bare areas nearly to totally match that expected for the site.	STATE OF ASSESSED.	formation is rare; some evidence pedestalled plants or rocks as of past pedestal formation expected for the site. Terracettes especially in water flow patterns absent or uncommon.	3	
					M		$\vee$		N		W	Stability	Soil/Site
	N	transfer to the second					W		N		W	Function	Hydrologic
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Comments	e Plants	Continuents		15. Annual Production	Comments	Amount	Comments	13. Plant mortality/ Decadence	Comments	12. Functional/ Structural Groups	Comments	11. Compaction Layer (below soil surface).	Comments	10. Piant Community Composition and Distribution Relative to Infiltration and Runoff.	Comments	9. Soil Surface L of Degradation	indicator:
	Dominate theisite	March of String Strangers	b.oggetter b	20% of potential	and the second section of the second section is a second section of the second section second section section second section second section second section sec	Largely absent or dominant (crelative to site pospnial and rweather.	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Dead and/or decadent plants are common.		Number of F/S groups gready reduced: and/or relative dominance of F/S groups has been dramatically altered; and/or number of species within F/S groups not expected for the F/S groups dramatically reduced, site, and/or number of species within F/S groups significantly reduced.		Extensive; severely restricts water movement and root penetration.		Infiltration is severely decreased due to adverse changes in plant community composition and/or distribution. Adverse plant cover changes have occurred.		Soil Surface Loss Soil surface horizon absent. Soil Degradation structure near surface is similar to, or more degraded than that in subsurface horizons. No distinguishable difference in subsurface organic matter content.	I. Extreme
	Common throughout the site.		production	of potential		Greatly reduced or increased la relative to site potential and weather		Dead and/or decadent plants are somewhat common.		~ ~		Widespread; greatly restricts water movement and root penetration.		Infiluation is greatly decreased due to adverse changes in plant community composition and/or distribution. Detrimental plant cover changes have occurred.			2. Moderate to Extreme
	Scattered throughout the site.			40 to 60% of potential		Moderately more or less relative to site potential and weather		Some dead and/or decadent plants are present.		Number of F/S groups moderately reduced; and/or one reduced; and/or relative or more subdominant F/S groups dominance of F/S groups has replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.  Number of F/S groups slightly reduced; and/or reduced; and/or number of species within F/S groups moderately reduced.		Moderately widespread; moderately restricts water movement and root penetration.	53.00 - 2.00 - 2.00 - 2.00	Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.		Stell less or degradation severe Moderate soil loss or threat hour sue, Minimal degradation in plant interspaces degradation in plant interspaces with some degradation beneath content and structure of surface plant canopies. Soil structure is anyl subsurface layers.  Content is significantly reduced.	e 3. Moderate
siles.	sent primarily on disturbed			60 to 80% of potential		Slightly more or less relative to site potential and weather.		Slight plant mortality and/or decadence.		Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.		Rarely present or is thin and weakly restrictive to water movement and root penetration.		Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.		S the second	4. Slight to Moderate
	Rarely present on the site.	a constitution	production	Exceeds 80% of potential		Amount is what is expected for the site potential and weather.	alic.	Plant mortality and decadence imatches that expected for the		F/S groups and number of species in each group closely match that expected for the site.		None to minimal; not restrictive to water movement and root penetration		Infiltration and runoff are equal to that expected for the site.  Plant cover (distribution and amount) adequate for site protection.		Soil s struct conte the si	5. None to Slight
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indicator ratings in the indicator summary section Attribute Summary: Circle the umber that best fits the "preponderance of evidence" for each of the three attributes relative to the distribution of Crusts Comments 16. Biological Perennial Plants Capability of Comments (native or seeded) 17. Reproductive Indicator: climatic conditions. very limited suite of functional Found only in protected areas, regetative tillers is severely reduced relative to recent Capability to produce seed or 1. Extreme in protected areas. Largely absent, occurring mostly in protected areas and with a climane conditions. reduced relative to recent 2. Moderate to Extreme Capability to produce seed or vegerative utters is greatly In protected areas and with a Evident throughout the site but Largely intact and nearly minor component in interspaces continuity is broken matches site capability climatic conditions. limited relative to recent Capability to produce seed or vegetative tillers is somewhat 3. Moderate climatic conditions. vegetative tillers is only slightly Capability to produce seed or limited relative to recent 4. Slight to Moderate vegetative tillers is not limited matches site capability Capability to produce seed or 2. Moderate to Extreme conditions. relative to recent climatic 1. Extreme None to Slight Slight to Moderate Moderate Indicator Summary: 5. None to Slight Soil/Site Soil/Site Stability Hydrologic Hydrologic

J. RAINAN

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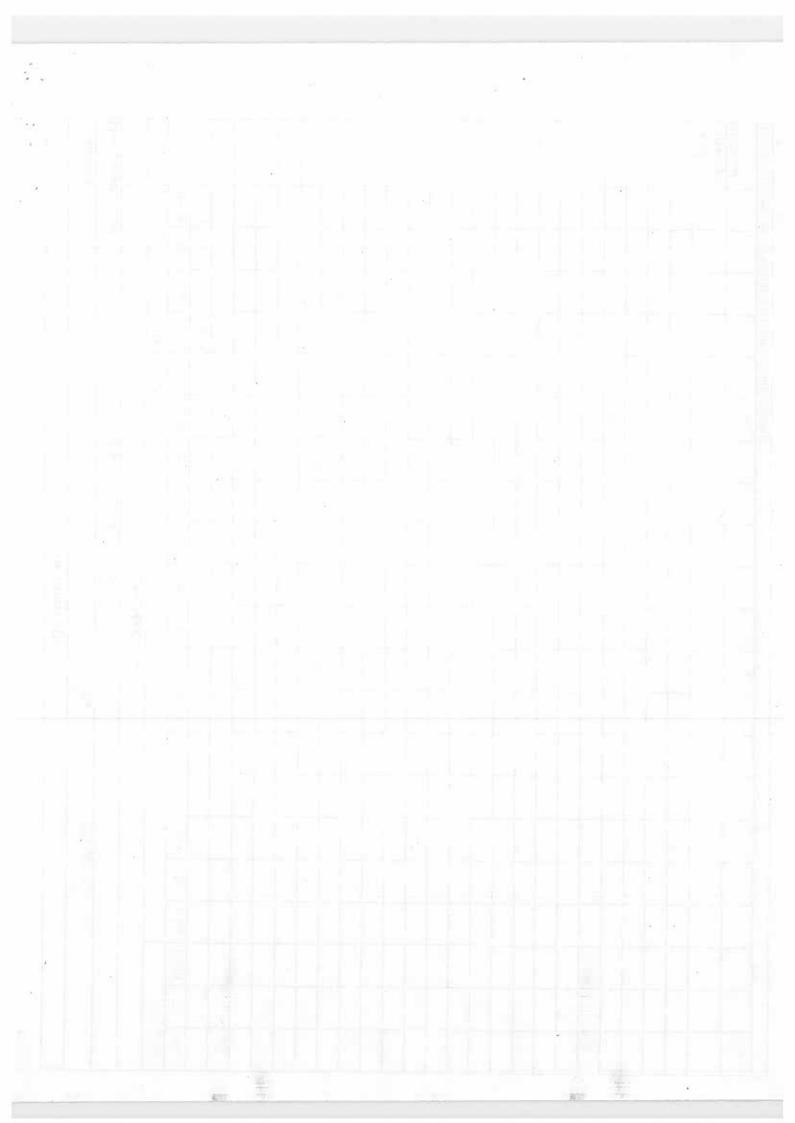
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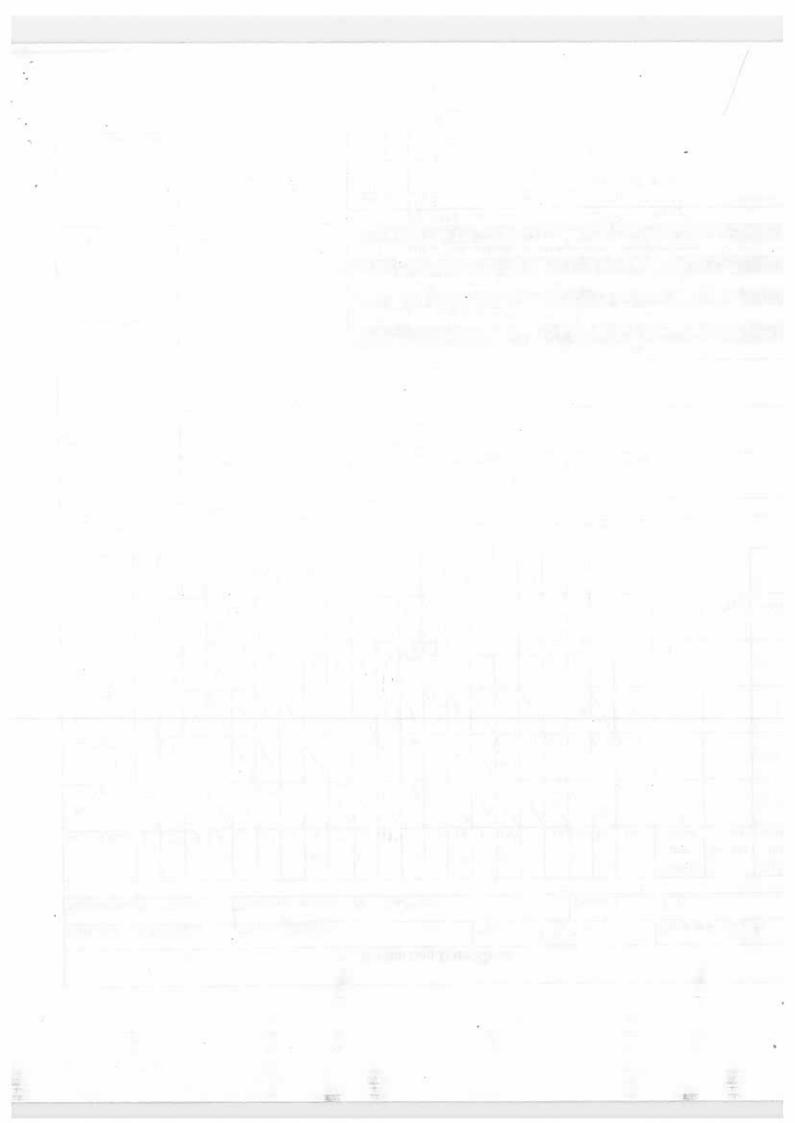
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Intercept % Cover Observers: Line Length: 30 m Total Circle intercept values that are standing dead material From 7(4) HASPERS o 89 STANER inter 2 % 8 From 2735 2 182 1-3745 Ӛ 47 inter 47 2% Transect From J 으 inter Line Intercept From Species Codes: То inter Date: 7/13/01 From To inter Polygon #: 216 From ö inter From Jo inter

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Rangeland Health Assessment - Canyons of the Ancients National Monument  Functional/Structural Group Worksheet  Functional/Structural Group Series List for Functional/Structural Group Portsheet  Functional/Structural Groups  Functional/Structural Groups  Functional/Structural Group Portsheet  Functional/Structural Group Portsheet  Functional/Structural Group Portsheet  Potential*  Actual Polygon number: 2/1 C  Clayey Saltdesert - 403  Species List for Functional/Structural Group Phant names - Potential  Plant names - Potential  Plant names - Potential  Plant names - Potential  Plant names - Actual  Plant names - Calledy  Species List for Functional/Structural Group  Plant names - Actual  Plant names - Calledy  Actual  Plant names - Potential budsage.  Actual  Plant names - Actual  Actual  Actual  Actual  Plant names - Actual  Actual  Plant names - Actual  Plant names - Actual  Plant names - Actual  Plant names - Actual  Plant names		Actual is for the area of evaluation			M - Minor = 2 to 5% composition
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Rangeland Health Assessment - Canyons of the Ancients National Monument	on or ecological reference area	* Potential based on ecological/range site description		Sition	D - Dominant = $40$ to $100\%$ compo
Rangeland Health Assessment - Canyons of the Ancients National Monument  Functional/Structural Group Worksheet  Clayey Saltdesert - 403  Functional/Structural Group Series List for Functional/Structural Group Devergeen  Name Potential* Actual Plant names - Potential Group Plant names - Potential Group Plant names - Potential Group Plant names - Actual Plant names - Actual Plant names - Potential Group Species List for Functional/Structural Group Plant names - Actual Species List for Functional/Structural Group Plant names - Actual Plant names - Actual Plant names - Actual Plant names - Actual Species List for Functional/Structural Group Plant names - Actual Ricegnas, needle&thread, Sandburg, Threeawn S					
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Rangeland   Health Assessment - Canyons of the Ancients National   Monument		Wooly-locoweed ~	1		Forbs - Nitrogen fixing
Rangeland Health Assessment Canyons of the Ancients National Monument	14663	Globemallow (Sego, Cymopteris	4	N	Forbs - perennial
Rangeland Health Assessment - Canyons of the Ancients National Monument		Onion, Phlox, Primrose, Princesplume,	1		A CLOS HITTER
Rangeland Health Assessment - Canyons of the Ancients National Mon-Functional/Structural Group Worksheet    Tark   Groups   Polygon number: 2/ (   Clayey Saltdesert - 403     Clayey Saltdesert - 403	ERCIG DECM DEPI 120		3		Forhs - annual
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Rangeland Health Assessment - Canyons of the Ancients National Mon Functional/Structural Group Worksheet  Clayey Saltdesert - 403  onal/Structural Groups Potential* Actual Plant names - Potential  M Utah Juniper  NI T Rabbitbrush D Nuttrill saltbush Mat saltbush M Shadscark-Fourwing, winterfat, budsage, M T Snakeweed		Salina wildrye, squirreltail	_	S	Cool Season Bunchgrasses
Rangeland Health Assessment - Canyons of the Ancients National Mon- Functional/Structural Group Worksheet    Polygon number: 2/(   Polygon number: 2/(   Clayey Saltdesert - 403     Onal/Structural Groups   Species List for Functional/Structural Group     Potential*   Actual   Plant names - Potential     M		1	+	M	Shrubs - invasive
Rangeland Health Assessment - Canyons of the Ancients National Mon  Functional/Structural Group Worksheet    Polygon number: 2/6     Polygon number: 2/6     Clayey Saltdesert - 403     Onal/Structural Groups   Species List for Functional/Structural Group     Potential*   Actual   Plant names - Potential     M			2	S	Shrubs - non-sprouting
Rangeland Health Assessment - Canyons of the Ancients National Mon- Functional/Structural Group Worksheet  Polygon number: 2/ C Polygon number: 2/ C Clayey Saltdesert - 403  unctional/Structural Groups  Me Potential* Actual Plant names - Potential  M Utah Juniper  M Utah Juniper		Nuttall salibush, Mat salibush	7	D	Shrubs - non-sprouting
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Rangeland Health Assessment - Canyons of the Ancients National Mon- Functional/Structural Group Worksheet    Polygon number: 2   Clayey Saltdesert - 403     Polygon Structural Groups   Species List for Functional/Structural Group     Polential*   Actual   Plant names - Potential					1
Rangeland Health Assessment · Canyons of the Ancients National Mon- Functional/Structural Group Worksheet    Polygon number: 2   Cayey Saltdesert - 403   Polygon number: 2   Cayey Saltdesert - 403   Clayey Saltdesert - 403	Plant names - Actual		Т	Potenti	Name
Rangeland Health Assessment - Canyons of the Ancients National Mon Functional/Structural Group Worksheet 7+8+66 [Date: 9/13/2] Polygon number: 21 ( Clayey Saltdesert - 403	Species List for Functional/Structural Group	Species List for Functional/Structural Group	S	al Groups	Functional/Structur
Rangeland Health Assessment • Canyons of the Ancients National Functional/Structural Group Worksheet ファム・ビビ Date: カイフカノ Polygon number: 2/ (		Clayey Saltdesert - 403	1		
		Polygon number: 2/6	14/11/10	Date	
		Functional/Structural Group Worksheet			
	nument		geland Health	Rang	32.

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## **CANM Rangeland Health Evaluation Photos**

Allotment Yellow Sacket

Polygon # 216

Date 9 / 13 / 2001





## Canyons of the Ancients National Monument

Rangeland Health Evaluation Summary Worksheet - Evaluation Area

				mments
Nearly matches what is expected Matches what is expected for the for the site; erosion is minor with some instability and deposition.  Matches what is expected for the Matches what is expected for the site; minimal evidence of past or current soil deposition or deposition.	Nearly matches what is expected for the site; erosion is minor with some instability and deposition.	More numerous than expected; deposition and cut areas continon; occasionally connected.	Extensive and numerous; unstable with active erosion; usually connected.	Water Flow
				mments
No recent formation of rills; old Current or past formation of rills rills have blunted or muted as expected for the site features.	Active rill formation is slight at infrequent intervals, mostly in exposed areas.	Rill formation is moderately active and well defined throughout most of the area	Kill formation is severe and well Rill formation is moderately defined throughout most of the active and well defined area throughout most of the area	
Hydrologic	3. Moderate	2. Moderate to Extreme	1. Extreme	ndicator:
			Indicator Rating:	art 2. Indic
or Site/Soil Description and/or experience	(ERA number)	Ecological Reference Area	son:	епситагк из
	re: NOME	reads, chainings, fire:	es on area and significan	Table Haluelle
The second secon			Mail	ivestock Use:
Dionata:	The state of the s		SMT	Vildlife Use:
Drought 2000 Normal 2001 Was	Recent Weather (last 2 vears):	p II "	T: Cortez 13". Hovenweep [1"	vg. annual PPT:
3 -> 10"	3.	2 Sedrock Z	TRUEL Y MOUNT	9
		pth:	JSI diagnostic horizons in profile and depth:	JSE diagnostic
MANY SAME	20-40" X Deep >40"	Shallow 10-20" Moderate 20-40"	Very shallow <10" Shallo	epth: Very
All Toronto		VIOCUM	いたのうというかん	1
TOR OFFICE PLANE	104 10 10 100 100		Evaluation Area Determination:	Evaluation Ar
,4/		2 3-7" stand ch	1+2-13 0-3"	6506
Sources	Dec dag 7-040		rofile	List diagnostic
Irarent material; collusion, altuvium ( residuum trom mixed	4	Shallow 10-20" Moderate 20-40"	allow <10"/ X	Depth: Very
A Control of the Cont	erest effect at ear	l oans	es stony sand	Surface texture:
Same Same	eference area.	Range/Ecological site description, soil survey, and/or ecological reference area.	cal site description, soil s	Range/Ecolog
Topographic Position: NESA Slope Dievation: Salas		Wabect: OX 1 1		-
Number: 406	CAKS	A CA	Slope:   2%	Slope: 12%
Number: 1553 Manufacture	SAT	18VY or to	15	Range/Esolog
Number: (7.18	<u></u>	Site Photos - Roll: 3	1	Sell Man This
136NR 200	Legal SES 13 TO		GES Int 100 Satell Tolling	Location: G
re:		TO F	2	1
Date: 9-13-01   Polygon # 20 7		spe 15	OF LONGE	~
Commence of the commence of th		itation;	Fart 1. Area of Interest Documentation:	Fart L. Are

Abudant eating pedestilling industries pedestilling on the paths and offermate in the paths and offermate industries pedestilling industries pedestilling industries pedestilling on the paths and offermate industries are pedestilled with industries pedestilling on the paths and offermation is treet, some obtained pedestilling on the paths and offermation is treet, some obtained pedestilling industries the pedestilling on the paths and offermation is treet, some obtained pedestilling industries in pedestilling on the paths and offermation in paths pedestilling of the paths and offermation in paths pedestilling of the paths and offermation of paths pedestilling offermation in paths pedestilling on the paths and offermation in paths pedestilling offermation in paths pedestilling offermation of paths	Comments	Resistance to Erosion		. Litter Movement	Comments	6. Wind-Scoured Blowouts, and/or Deposition Areas	Comments	5. Gullies	Comments	4. Bare Ground	Comments	3. Pedesials and/or Terracettes	indicator:
2. Moderate to Extreme   3. Moderate   4. Slight to Moderate   5. None to Slight   SollSite   Infractic common. Some tock   Sinhility   Infractic common. Some tock   Sinhility   Sinhil		nely reduced throughout  Biological stabilization including organic matter stogical crusts virtually		The state of the s				Common with indications of active erosion and downcutting; vegetation is infrequent on slopes and/or bed. Nickpoints and headcuts are numerous and active.	A STATE OF THE STA	Much higher than expected for the site. Bare areas are large and generally connected.			-
Illing; most Active pedestalling or terracette Current or past evidence of Stability paths and formation is rare; some evidence pedestalled plants orrocks as as exposed of past pedestal formation expected for the site. Terracettes sare of than expected for the site. Bare candy to totally materithat expected for the site. Terracettes and or on exposed slopes.  Uncommon with vegetation stabilizing the bed and slopes; tent on signs of active headcuts, casional nickpoints, or bed eroston.  Infrequent and few.  I		<u> </u>		Moderate to extreme; loosely concentrated near obstructions. Moderate to small size classes of litter have been displaced.		Common.		Moderate to common with indications of active erosion; vegetation is intermittent on slopes and/or bed. Headcuts are active: downcutting is not apparent				b foderate active pedestalling; terracettes common. Some rock and plants are pedestalled with coccasional exposed roots.	2. Moderate to Extrem
statiling or terracette Current or past evidefice off start; some evidence pedestalled plants or rocks as expected for the site. Terracettes absent or uncommon.  exposed slopes.  Amount and size of bare areas read for the site, Bare real and slopes; lead for the site, Bare real and slopes; leading agents reduced for the site.  Drainages are represented as the bed and slopes; lactive headcuts, or bed eroxion.  Matches what is expected for the site.  Of erosion with vegetation or bed eroxion.  Matches what is expected for the site.  Matches that expected for the site. Surface soil is stabilized by organic matter decomposition products and/or a biological ted.		at least		Moderate inovement of smaller size classes in scattered concentrations around obstructions and in depressions.		Occasionally present.		Moderate in number with indications of active erosion; vegetation is intermittent on slopes and/or bed. Occasional headcuts may be present.					
Soil/Site Soil/Site Stability  the Stability		in soil surface interspaces or throughout the agents reduced		Slightly to moderately more than expected for the site with only small size classes of litter being displaced.		Infrequent and few.		Uncommon with vegetation stabilizing the bed and slopes; no signs of active headcuts, nickpoints, or bed erosion.		d Slightly to moderately higher than expected for the site. Bare areas are small and rarely connected		Active pedestalling or terracette formation is rare; some evidence of past pedestal formation especially in water flow patternand/or on exposed slopes.	4. Slight to Moderate
The state of the s		Matches that expected for the site. Surface soil is stabilized by organic matter decomposition products and/or a biological crust.		Matches that expected for the sile with a fairly uniform distributing of litter.		Matches what is expected for the site.		Drainages are represented as natural stable channels; no signs of erosion with vegetation common.		Amount and size of bare areas nearly to totally match that expected for the site.	The state of the s		5. None to Slight
WW 4 4 Function		W	LAU E CONTRACTOR		ŀ	4		W	-	7		1011	Soll/Site
		W		W	WASHINGTON			W		4	-	Function	Hydrologic

16. Invasive Plants I			Comments	Amount	Comments	13. Plant mortality/ Decadence	Comments	12. Functional/ Structural Groups	Comments	11. Compaction Layer (below soil surface).	Comments	10. Plant Community Composition and Distribution Relative to Infiltration and Runoff.	Connicial	9. Soil Surface Loss of Degradation
Dominate the site:	medical religions to reacti	Less than 20% of potential 2 production agreement p	The second section of the second section is a second section of the secti	Largely absent or dominant ( relative to site potential and r weather.		13. Plant mortality/ Dead and/or decadent plants are     Decadence		Number of F/S groups greatly reduced: and/or relative dominance of F/S groups has been dramatically altered; subdominant groups replaced beand/or number of species within F/S groups not expected for the F/S groups dramatically reduced. site; and/or number of species within F/S groups significantly reduced.		Extensive; severely restricts water movement and root penetration.		Infiltration is severely decreased linfiltration is greatly decreased due to adverse changes in plant due to adverse changes in plant community composition and/or distribution. Adverse plant cover distribution. Detrimental plant changes have occurred.		structure near surface is similar to, or more degraded than that in subsurface horizons. No distinguishable difference in subsurface organic matter content.
Common throughout the site.		20 to 40% of potential production		Greatly reduced or increased relative to site potential and weather.		Dead and/or decadent plants are somewhat common.				Widespread; greafly restricts water movement and root penetration.		Infilitation is greatly decreased due to adverse changes in plant community composition and/or distribution. Detrimental plant cover changes have occurred.		2. Noderate to Extreme  See has or degradation severe throughout site. Minimal differences in soil organic matter content and structure of surface and subsurface layers.
Scattered throughout the site.		40 to 60% of potential production		Moderately more or less relative to site potential and weather		Some dead and/or decadent plants are present.		Number of F/S groups moderately reduced; and/or one or more subdominant F/S groups replaced by F/S groups not expected for the site; and/or number of species within F/S groups moderately reduced.		Moderately widespread; moderately restricts water movement and root penetration.		Infiltration is moderately reduced due to adverse changes in plant community composition and/or distribution. Plant cover changes negatively affect infiltration.		Moderate soil loss or degradation in plant interspaces with some degradation beneath plant canopies. Soil structure is degraded and soil organic matter content is significantly reduced.
Present primarily on disturbed sites.	10.00	60 to 80% of potential production		Slightly more or less relative to site potential and weather.		Slight plant mortality and/or decadence.		Number of F/S groups slightly reduced; and/or relative dominance of F/S groups has been modified from that expected for the site; and/or number of species within F/S groups slightly reduced.		Rarely present or is thin and weakly restrictive to water movement and root penetration.		Infiltration is slightly to moderately affected by minor changes in plant community composition and/or distribution. Plant cover changes have only a minor effect on infiltration.		4. Slight to Moderate  Some soil loss has occurred and/or soil structure shows signs of degradation, especially in plant interspaces.
Rarely present on the site.		Exceeds 80% of potential production		Amount is what is expected for the site potential and weather,		Plant mortality and decadence inatches that expected for the sire		F/S groups and number of species in each group closely match that expected for the site.		None to minimal; not restrictive to water movement and root penetration		Infiltration and runoff are equal to that expected for the site. Plant cover (distribution and amount) adequate for site protection.		5. None to Slight  Soil surface horizon intact. Soil structure and organic matter content match that expected for the site.
	MANTHEODOLOGICAL STATES		District State of the		A STATE OF THE PARTY OF THE PAR		Las assembles			7	500 min			Stability F
21	THE PERSON NAMED IN COLUMN	7		4	Anti-month and a second a second and a second a second and a second and a second and a second and a second an	7			1	7	Section 1		-	Hydrologic Bi Function Inte

Attribute Summary	1		77			Comments	ica)	Comments	Capability of Perennial Plants (native or seeded)	Indicator:
Affribute Summary: Circle the umber that best fitt			-				Found only in protected areas, very limited suite of functional groups.		regulative tillers is severely reduced relative to recent climatic conditions.	1. Extreme
Attribute Summary: Circle the umber that best fits the "prependerance of evidence" for each of the three attributes relative to							Largely absent occurring mostly in protected areas and with a in protected areas.		Capability to produce seed or vegetative filters is greatly reduced relative to recent climatic conditions.	2. Moderate to Extreme
e" for each of the three attribute							In protected areas and with a Evident throughout minor component in interspaces continuity is broken		Capability to produce seed or vegetative tillers is somewhat limited relative to recent climatic conditions.	3. Moderate
es relative to the distribution of							Evident throughout the site but continuity is broken		Capability to produce seed or vegetative tillers is only slightly limited relative to recent climatic conditions.	4. Slight to Moderate
the distribution of 5. None to Slight	4. Slight to Moderate	3. Moderate	2. Moderate to Extreme	1. Extreme	Indicator Summary:		Largely intact and nearly matches site capability		to produce seed or Capability to produce seed or tillers is only slightly vegetative tillers is not limited relative to recent climatic conditions.	5. None to Slight
195	4	(3)			Soil/Site Stability		W	Name and Address of		Soil/Site
	5	(6)			Hydrologic Function		N	diversamed and other		Hydrologic Function
100	4	(4)	2		Bic Inte	-	W	18	W	Bl. Inte

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Code	Range	Mid-point	Code	Range	Mid-point
<b>多</b> 度	0 - 1.0% cover	0.5%	6.00	55.1 - 65% cover	60.0%
0:51	1.1 - 5.0% cover	3.0%	277	65.1 - 75% cover	70.0%
到到	5.1 - 15% cover	10.0%	100	75.1 - 85% cover	80.0%
-20	15.1 - 25% cover	20.0%	9	85.1 - 95% cover	90.0%
32	25.1 - 35% cover	30.0%	A =	95.1 - 99% cover	97.0%
4	35.1 - 45% cover	40.0%	The Personal Property lies, Name of Street, or other party lies, Name of Street, Name of Stree	99.1 - 100% cover	99.5%
5	45.1 - 55% cover	50.0%			

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Growth form	1*	2	3	4	5	6*	7	8	9	10	11*	12	13	14	15	16*	17	18	19	20*	Total	factor	factor	weight
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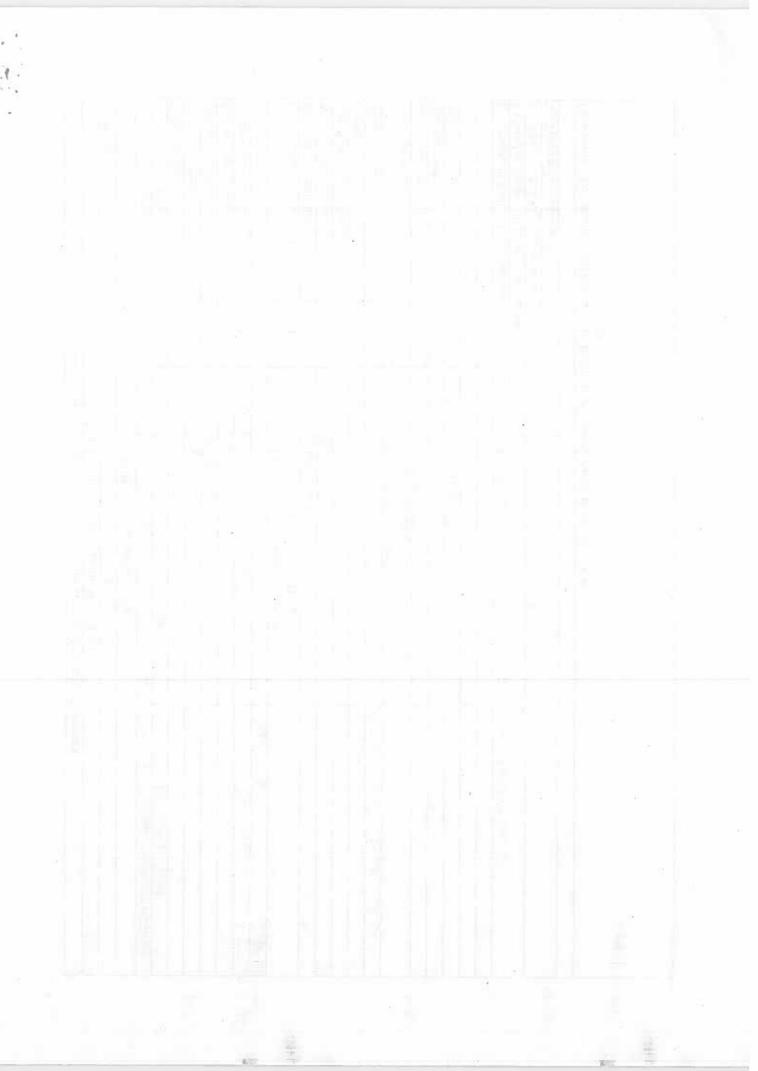
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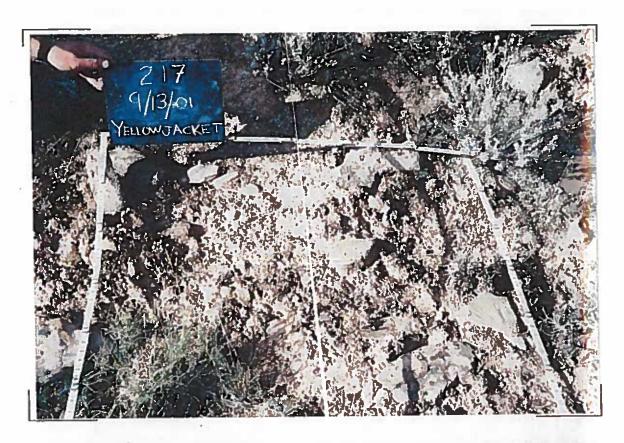
	Rangelar	d Health As	tional	Monument
		Fu	Functional/Structural Group Worksheet	
Observers: And Pers strate	Date: द	13/01	Polygon number: 12.17	
		Į.	Saltdesert Breaks - 406	
Functional/Structural Groups	l Groups		Species List for Functional/Structural Group	Species List for Functional/Structural Group
Name	Potential*	Actual	Plant names - Potential	Plant names - Actual
Trees - deciduous				
Trees - evergreen	NΙ	) VV	Utah Juniper)	
Shrubs - sprouting	M		Rabbitbrush	12
Shrubs - non-sprouting	D	-4-	Shadscale	
Shrubs - non-sprouting	M	3	Fourwing, Winterfat, Sage	Enlanden Prickly Pers ATGAR
Shrubs - invasive				snakeweed
) - - 2		1	Salina wildrye, Ricegrass, Squirreltail,	1
Warm Season Buncherasses	S	\(\frac{1}{2}\)	Alkal sacaton	
Warm Season Rhizomatous Grasses	D	S	Callera	
Cool Season Rhizomatous	M	1	Westernwheat	
Annual Grasses		S		Chart, VVIOC
Forbs - annual	-		)	DEPT LASO LTIGE DRICK
Forbs - perennial	2		Onion, Knlox) Primrose, Princesplume, Globemallow, Sego, Cymopteris, Larkspur	CHEES
Forbs - Nitrogen fixing		1	Locoweed	
Noxious weeds				
Biological crusts	s	M <	Cyanobacteria, Lichens, Moss	
D - Dominant = 40 to 100% composition	sition		* Potential based on ecological/range site description or ecological reference area	ion or ecological reference area
S - Subdominant = 10 to 40% composition	osition			
M - Minor = $2 \text{ to } 5\%$ composition			Actual is for the area of evaluation	
Comments: Potential annual prod	luction shoul	ld be 200 po	Potential annual production should be 200 pounds/acre in an average year	

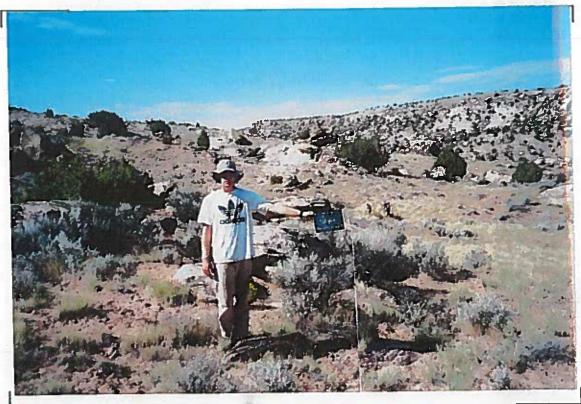


## **CANM Rangeland Health Evaluation Photos**

Allotment Polygon # Date

Hellow Jucket 217 9/13/2001





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